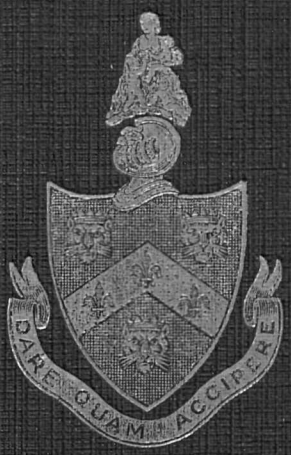
GUY'S
HOSPITAL
GAZETTE

NEW SERIES
VOL. 44

1930



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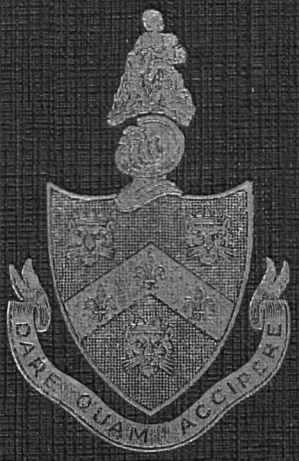

Guy's Hospital Gazette.

GUY'S HOSPITAL GAZETTE.

VOL. XLIV.

NEW SERIES.

1930.

LONDON:
ASH & CO., LTD., Printers, Henry Street, London Bridge, S.E.1.
1930.

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GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *11th January* 1930 — *Number* 1082

PASSIM

THE eagerly awaited day when Guy's should be in possession of radium has at long last come to pass; we have been loaned .5 gramme by the King Edward's Hospital Fund. For the future, in place of second-hand knowledge regarding the results of treatment of cancer with radium, we will gradually acquire knowledge built up from our own experience producing, we may hope, advances linked with the name of this hospital. In the meantime, we will be in a position to do for ourselves what others have been showing us how to do for several years past.

The radium has been placed chiefly in needles containing small quantities: 153 containing 0.6 milligramme, 100 containing 1.33 milligramme, and 45 containing 5.0 milligrammes; in addition we have two cells each containing 25.0 milligrammes. In this way the total quantity has been utilised probably to the greatest advantage.

As is only to be expected, the arrival of radium within the confines of the Hospital, has necessitated various changes in the internal arrangements. The first consideration is the housing of this precious element; for this purpose there is, as we have seen, a large safe containing a leaden cube, cunningly fashioned so that the needles lie in small receptacles surrounded on all sides by, at the thinnest, six inches of lead. To keep watch and ward, a "Sister Radium" has been appointed, and she, we learn from a Guy's slip pinned to the door, is to be found in a nicely-furnished room adjoining that devoted to clinical pathology.

Certain beds have been allocated for the sole use of cases treated with radium, namely, five in Cornelius, two in Evelyn, and two in Queen; no doubt others will also be occupied before very long, as doctors of surrounding districts learn that we are now in possession of radium.

THE nurses, we are inclined to think, are seen always at or near their best, but at the Nurses' Dance, on Monday, 30th December, we thought them beyond compare; Colleens from Erin's Isle, milkmaids from English lowlands, Celts from the far North, in fact one and all quite overwhelmed us with their gay dresses and gayer mood. As always the dance was a huge success from start to finish, the latter delayed for half-an-hour with Matron's timely consent. All to whom fell the arrangements of this enjoyable evening are indeed to be congratulated.

WE should like to take this opportunity of offering our congratulations to Dr. Herbert French, C.B.E., on being awarded the C.V.O. in recognition of his long professional association with His Majesty's Household. Dr. French, before his retirement, always took a very keen interest in his public appointments, as well as in his patients at Guy's, and thoroughly deserved the great reputation he developed for himself, and the respect in which he was held not only at Guy's and in the medical profession, but by all classes of men throughout the country.

THE following have been appointed Clinicals for the period January 16th to April 16th:—

Mr. H. J. Croot.
Mr. W. J. Ferguson.
Mr. G. J. Hollis.
Mr. J. M. Lees.
Mr. T. G. Robinson.
Mr. R. Stewart-Harrison.

With the retirement of Mr. E. T. Conybeare from the editorship of the *Gazette*, after more than two years of office, we have lost a guiding brain and an able pen only too difficult to replace; his "Interviews with the Really Great" will long be remembered by his contemporaries for their extraordinary accuracy of observation with skilful portrayal of character written in the most delightfully humorous vein. It was, however, as an organiser that he has done so much for this journal.

As President of the Residents, and in many other spheres of activity, we have had ample opportunity of observing Mr. Conybeare's unusual flair for leadership and for always "producing the goods," to use a colloquialism.

We wish him all success in his further career, which, for a time any way, is to continue at Guy's, so that we may still hope for occasional contribution from his pen.

We would bring to general notice that on Friday, 31st January, and Saturday, 1st February, at 8 p.m., performances will be given of "The Last of Mrs. Cheyney," at the New Scala Theatre, by the Asabs (Affiliated South American Banks Sports Club) Dramatic Society; these performances will be in aid of Guy's. Tickets (numbered and reserved) range in price from 1s. 2d. to 7s. 6d., and may be obtained from the Hon. Appeal Secretary, Guy's Hospital, or from the Hon. Secs., Asabs Musical and Dramatic Committee, Messrs. E. Agatt and T. Barber, 117, Old Broad Street.

Angina Pectoris and Coronary Thrombosis

A Clinical Lecture delivered at Guy's Hospital, August, 1929, by Dr. Maurice Campbell

GENTLEMEN,—There are few conditions where the accuracy of the diagnosis is of more importance, or where more divergent views have been held. To say that a pain is anginal and to make a patient give up his work, when there is little reason for thinking he has heart disease, is as serious and as common an error as to decide that an attack of angina does not much matter, because the pain is not very severe or is attributed by the patient to his indigestion.

Angina is not a synonym for all types of cardiac pain; and still less for all pain which the patient feels in the neighbourhood of his heart. It is a definite syndrome which has a different significance from any other type of cardiac pain.

What is the pain and what are the associated symptoms to which you refer in speaking of angina? This is the first question I want to answer, and it is most important to be very clear on the history and symptoms, because often you must be ready to make the diagnosis without any help from physical signs. You will find obvious heart disease in many patients; and in others having apparently no heart disease, you will get evidence of it if an X-ray and an electro-cardiogram are taken. But even then there are other patients with typical angina who, if they did not say anything about their symptoms, might be passed as first-class lives. Those with no signs except the history, may have just as serious angina, with the same prognosis, as others with gross cardiac signs.

THE CHARACTER OF ANGINAL PAIN

The most important point is the site of the pain. It is not usually over the heart in the popularly supposed site under the left breast, but is in the mid-line, from where it may spread either to the left or right, but more likely to the left. If asked to indicate its site the patient will generally use one finger and point to the mid-line, but there may be a more diffuse distribution, when the area will be indicated by placing the whole hand over the chest. It may pass down the left arm or less frequently down the right arm, or up into the angle of the jaw on either side.

The patient who has a large heart, with high blood-pressure, or mitral stenosis, or an adherent pericardium, may have pain and discomfort under the left breast; but many other patients with no heart disease will also have pain under the left breast, so that pain in this site is not a great help in diagnosis; nor does it help so much in prognosis.

The next point is the nature of the pain. The dramatic description in most books, severe pain, starting in the sternum and radiating down the left arm, giving rise to a feeling of impending death, must not be taken as the only form of

angina. It is the extreme form, and you should not wait to diagnose angina until then, because a patient who has mid-sternal pain, without any feeling of impending death may yet have serious angina.

In general, the pain is extremely severe, and if the patient has experience of other pains, he may rank it for severity with gall stone colic or, if a woman, with the pains of labour. It will cause sweating and nearly always it will keep the patient absolutely at rest. That is important, because sometimes when a patient has agonising pain he walks about with the idea of getting rid of it, but, as a rule, the patient with severe angina will keep still; and fortunately, if he does, the pain will usually pass off after a short time.

The duration of the pain also helps in diagnosis, for it does not often last long. If the patient says he has pain at the time of examination and that he has had it all day, this is almost conclusive against it being angina. Ordinarily it lasts a few minutes, and as—except in severe cases—it does not come on very frequently, you will not generally chance to see the patient during an attack. I have been carefully through my notes of 50 cases and only three of those have actually had attacks while I was examining them.

More important than anything else, except perhaps the site of the pain, are the conditions which give rise to it. You are familiar with its sequel to exertion; indeed if it is never related to exertion in any way you must be most careful about calling it anginal. But there is no doubt that some people get it at night when they are at rest in bed, and a few are characterised by getting it only under those conditions. So though a patient may be able to do a good deal, even including stairs, without having the pain, and may have his worst pain when in bed, yet it may be angina. It is difficult to explain, but you must accept this as one variety. On the whole, a man who once has it like that has a tendency to suffer in the same way; while another is rarely liable to get it except on exertion; often there is not much mixing of these types.

There is a great variation in the things which will bring on an attack of angina at different times. When a man gets up in the morning he may have it after walking a hundred yards, but later in the day may be able to walk several miles without pain. Often it is associated with definite things, for example, a particular flight of stairs at a certain stage in his walk may give it to one patient and little else may cause it. There is, too, much variation with the weather, for in cold weather, particularly when walking against the wind, attacks are likely. And though it is harder to walk against the wind than with it, it must be something more than that, some reflex change, because walking slowly against the wind does not make much difference in the exertion.

A patient may get it on moving from a hot to a cold room, when it is due to the change of temperature and not to exertion, or on getting into bed in contact with cold sheets. Such small points may precipitate many attacks, and by noting these determinants and avoiding them you can often materially reduce their frequency.

AGE INCIDENCE AND ETIOLOGY OF ANGINA

It is mainly by the history that the diagnosis must be made, but the physical examination is of great importance. The finding of some form of heart disease which is likely to provoke angina will confirm the diagnosis, and is the only way of deciding on the etiology, which may be invaluable for prognosis and treatment. In addition to the usual methods, the examination is not complete without feeling several peripheral arteries and looking at the retinal vessels, without an electrocardiogram and an ortho-diagram of the heart and aorta, and without a Wasserman reaction and an enquiry for a history of syphilis.

TABLE I.—Etiology of 50 consecutive cases of Angina and Coronary Thrombosis.

	Atheroma.	High blood-pressure.	Syphilitic Aortitis.	Total
Angina Pectoris	15	13	7	35
Coronary Thrombosis	10	3	2	15
Total	25	16	9	50

Table I shows you the etiology of these cases and of others with coronary thrombosis which I shall speak of later. Easily the commonest association is atheromatous change in the arteries. This is commoner than high blood-pressure, which is the next most important thing; after which comes syphilitic disease of the aorta involving often the aortic valves. Angina is not commonly associated with aneurism, though at first you might expect it to be so; even less commonly is it associated with rheumatic aortic disease.

I have told you it may occur in people who show no disease which you can find. They generally have atheromatous changes in the coronary arteries, the proof of which is afforded by following them for years or for months until death. Then in many patients who apparently had no disease of the heart you find advanced disease of the coronary arteries. I will come back to that when discussing the theories of causation, after I have spoken of coronary thrombosis.

The age incidence is important. You will very rarely get angina under 40, unless there is syphilitic aortic disease. So if you see someone with pain in the chest who is only 30, the presumption is against it, and you must be sure of your ground before making your diagnosis. From 40 onwards it begins to get commoner, but still you would be surprised to see a case in which you could not find any cause for it, for there is more likely to be syphilitic heart disease or a raised blood-pressure. After 50, and still more after 60, you see an increasing proportion of cases with no other obvious signs of disease, and a diminishing proportion with high blood-pressure and syphilis. Even after 60 syphilis and high blood-pressure play a part, though a less important part than they did earlier.

In Table II angina and coronary thrombosis are shown together, because there is little difference in their age incidence, except that perhaps the cases with coronary thrombosis are rather younger, and not older, as might be expected.

TABLE II.—Age Incidence of 50 consecutive cases of Angina and Coronary Thrombosis.

Age.	Ather-oma.	High blood-pressure.	Syphilitic Aortitis.	Total
40—49 yrs.	3	3	4	10
50—59 ,, ...	9	8	3	20
60—69 ,, ...	10	4	2	16
70—79 ,, ...	3	1	0	4
Total	25	16	9	50

ILLUSTRATIVE CASES

Before discussing prognosis and treatment, it will be best to give you some histories that illustrate the different types.

CASE I, aged 56, had done heavy work for 20 years, always with good health. Six weeks before I saw him he had severe pain high up in the mid-sternal line, while at work. He had this daily for a fortnight, until he gave up work; he had some attacks at night also. He was rather short of breath, but had not taken any notice of that before the pain. He tried to associate the pain with indigestion by saying the attacks were always stopped if he brought up wind, but he had not suffered from indigestion before. He had stopped work a month when I saw him, and had only had twelve attacks, all when he tried to do something more strenuous than usual.

He had some enlargement of the heart and a high blood-pressure, 190 mm. Hg. systolic, 115 mm. diastolic; the only changes shown by the electro-cardiogram were preponderance of the left ventricle with notched QRS complexes and a flat T wave in Lead III. After three months he went back to easier work, in fact his description was that he did very little, but luckily for the same wage. He was given nitrites to take when he had the pain and this was successful in relieving most attacks. After eight months he came up again because he was getting more short of breath; his pain was much less, but there was for the first time some œdema of his feet, and enlargement of his liver, also his activities were much more limited. This shows angina as a first sign of myocardial failure; when a heart, which is no longer fit for it, is being put to perform its normal work. Then the patient does less, and probably loses his anginal symptoms. This man had not lost his entirely, as he occasionally had pain, and he remarked that he got it on going from a warm to a cold room.

That is a typical history of a patient whose angina is due to high blood-pressure. With easier work and treatment there may be improvement for a long time. His condition has changed very little in the last year.

CASE II had a much longer history. He was aged 60 when he first came here with slight mid-sternal pain. He was given treatment and advised to do less. He then felt fairly well until he was 67, when I saw him at hospital again because he had found for the last three months that whenever he was at work he got this pain; also if he hurried or lifted any weights. Here again it was associated with signs of heart disease; he had aortic stenosis, due to atheromatous changes. His heart was enlarged, but the blood-pressure was normal.

His electro-cardiogram showed deeply inverted T waves in Leads I and II (*see* Fig. 1). For comparison Fig. 2 is given from another patient with angina. It is true that normally the T wave may be inverted in Lead III, but here the deep inversion is Lead III and the flat T wave is Lead II, indicating myocardial change, as did his history of angina.

We tried to make him stop work, and he gave up for a time and was better, but it took a year to persuade him to give up all together. Meanwhile he still had attacks because he kept on doing heavy work.

Then he got swelling of the legs, ordinary congestive failure. It was the turning event, because after that he had to give up his work and only lived for two years. The doctor said he insisted on getting up and dressing himself every

day and living a fairly normal life at home in spite of considerable œdema.

Finally, instead of getting this pain, he had attacks of very acute dyspnœa, which lasted a short time and made him afraid to walk about; but, like the attacks of pain, were immediately relieved by nitro-glycerine and by nothing else. He dropped dead suddenly, as may happen with angina. But he was 70 when he died, and had suffered from angina for ten years. So there was nothing to be gloomy about in his original prognosis, because he did eight years' work after he was 60 and lived another two years at home, only suffering greatly the last three months of his life, for in his case the anginal pains were not agonising.

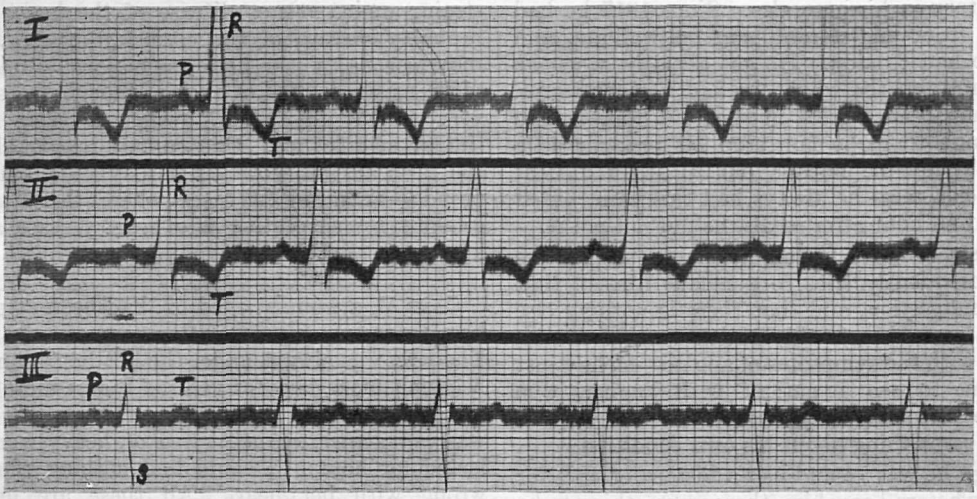


Fig. 1.

Electro-cardiogram of Case II, with angina, showing left ventricular preponderance and inverted T waves in Leads I and II.

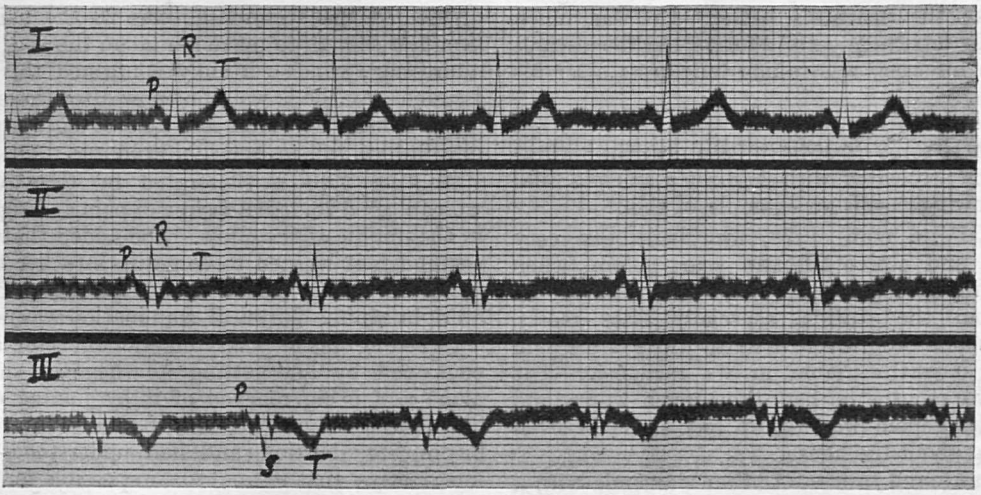


Fig. 2.

Electro-cardiogram of a man, aged 53, with angina and atheroma. The T waves are flat in Lead II and inverted in Lead III.

CASE III, whom I will give you shortly, illustrates certain particular points. He, again, is an elderly man, being 74, but it is chance that I have chosen examples as old as this, for there are plenty of younger ones at any age after 40. There was a long history in his case also. Since 1917 he had suffered from mid-sternal pain on walking, and often he had to stop. He got all right when he rested, and, on the whole, he had not got worse. But it had been a great nuisance to him, though not enough to make him stop his practice as a doctor. When he hurried out to see a patient soon after a meal he always had this pain, but if he rested an hour after meals, he did not get it.

This is a common finding in angina, so that the patient frequently tries to persuade himself that he has indigestion, and that there is nothing else the matter. Though this patient was a doctor, familiar with the symptoms of angina—he had just asked me to see a patient with angina, who said she had only indigestion—yet he himself said the same thing about his own condition!

Though he was 74 and had a history of pain for ten years before I saw him, there was nothing to be found wrong with his heart by any other method of examination, including X-rays and the electro-cardiogram. That, I think, is associated with his good prognosis, for he was getting about moderately well after ten years. Though there are still dangers, a normal X-ray and electro-cardiogram do make the prognosis better. He was much helped by nitrites in various forms, but the obvious help, in his case, was taking long rests after his meals.

Recently some cases have been described where angina is associated with Addison's anæmia, and the following case is an example of this.

Case IV, a man of 78, who had been very healthy and active till two years before, when he began having sternal pain on walking up hill from the station, especially after meals. He was not often even a week without the pain though it was variable in its incidence. The past two months he had been much worse and was getting pain walking up any stairs or even hurrying about the house.

He was found to have Addison's anæmia with a hæmoglobin percentage of only 34. When this improved after a transfusion, his attacks of angina were excited much less easily. Presumably the amount of blood carried by the coronary arteries was much limited; if the blood was of good quality it was able to carry enough oxygen for the heart muscle, but when there was also a deficiency of hæmoglobin it was not able to carry enough and anginal pain resulted.

THORACIC PAIN WHICH IS NOT ANGINAL.

I have chosen this rather cumbersome heading to avoid the use of that refuge of the destitute—pseudo-angina. Except in isolated cases, or where angina follows some altogether exceptional strain, angina means disease of the heart; and probably disease of the coronary arteries. One may reasonably use the terms major and minor to differentiate degrees of angina, though there is no very useful distinction, owing to their rather similar significance. One cannot reasonably use the term angina (however it may be qualified as pseudo—or false) in cases where there are no grounds for suspecting any heart disease at all. The next cases will help to illustrate what I mean.

CASE V, a woman, aged 52, had been attending hospital for seven years with a diagnosis of angina. The pain was always under the left breast and had been felt most days for years. It was more likely to come when she was walking than resting; but was worse *after, not at the time of*, heavy work and lasted for hours. I could find nothing whatever wrong with her heart. All these are unusual features for angina; though perhaps no one of them alone could exclude it, together they are conclusive.

After a thorough examination of the stomach and her other systems, I was sure that the pain could only be of nervous origin, whatever the exact mechanism of its production. Later I discovered that before she was 20 the pain had been felt enough to make her lie on the bed before undressing, which certainly confirmed this view. I cannot say she is well, but now after three years she is somewhat better and able to do more with reassurance and progressive exercises.

Another type is illustrated by Case VI. A woman, aged 23, had a feeling of pain and tightness in the middle of the chest. She added that it felt as though it wanted to come up into her throat, when she had to take a deep inspiration, and was all right again. Physical examination was normal. This feeling was of purely emotional origin, as was confirmed by her getting it whenever she was alone and being relieved of it by joining others. She had become depressed after curettage for an incomplete abortion, and had understood—quite incorrectly—that it would be impossible for her to have any children.

Of course, the diagnosis here was easy, but it may be more difficult in older patients, as in a man I saw this morning. He was 57, and had wanted to give up work because of mid-sternal discomfort, not related to exertion. I could find nothing on physical examination, but only felt justified in treating it lightly when I found that his son had recently been taken to prison.

TREATMENT AND PROGNOSIS

The two things which are really important in treatment are first, the general advice about how the patient should lead his life, and secondly, the actual treatment of his pain. If there is a syphilitic infection this is a third factor of equal importance, for the prolonged use of mercury and iodides following one or more courses of arsenical injections may lead to years of good health, even after severe angina.

Under the first heading almost every detail of the patient's life must come under review. Alcohol and tobacco must be remembered and if their use is at all excessive it must be cut down; but I have never seen a case where one could prove that prohibiting a moderate consumption of either was of any advantage, and to do so adds greatly to the patient's worries. Working or playing at 60 in a way that would be suitable for 40 is perhaps the most common thing that calls for curtailment. Large, unsuitable meals without any adequate rest afterwards are also important. It is difficult to over-estimate the influence of worry. Exposure to cold has already been mentioned.

The drug treatment is mainly that of the pain when it is present; for preventing its onset we must rely mainly on the general principles already given, though if high blood-pressure is present the appropriate treatment for that will help. You all know that what is needed in the attack is some form of nitrites. There are two which are about equally good; ordinary amyl nitrite capsules of the Guy's Pharmacopœia, 3 min. or 5 min. The other is trinitro-glycerine, which is put up in tablets of 1/100 and 1/200 gr. If the latter does not give a good result, change quickly to the 1/100 gr. Often I find these things have been given, but the patient has the impression that they are for use only in an emergency. There is no reason why they should not be used several times a day over indefinite periods. They temporarily reduce the blood-pressure and relieve the pain, and often the patient can get about and lead a more normal life, if he carries these things with him to stop the attacks when they come on. But you must give the warning that they make many people giddy, for if you give such a person one of these capsules and he falls in the street he will not be pleased. So test the effect first with the patient at home, and if there is no great giddiness, you can tell him to take them wherever he is.

The prognosis is extremely difficult, and that is why the condition is associated with so much fear. Two of these patients lived and worked relatively actively for ten years, and not a few may continue their working life for many years. But it is a dangerous condition, and only rarely do you see a patient to whom you should not recommend an easier mode of life, unless you can find a remediable cause for his pain, such as a period of heavy overwork or worry, perhaps with hurrying immediately after meals, excessive smoking or a syphilitic infection. If you do not find anything which you can remedy it means that he leads too active a life, and that he must take things easier. But I ask you to consider very carefully the need for such advice and what it implies to the patient before you give it, for it means condemning an active person to the life of an invalid.

CORONARY THROMBOSIS.

The distinction between coronary thrombosis and ordinary angina is extremely important, both from the point of view of prognosis and of treatment. Shortly, the picture is that of prolonged anginal pain, associated with much collapse which is not found with angina, and often followed by congestive failure. Sometimes there is failure without any severe pain, and this type should not be forgotten though I am not speaking of it to-day. Often death follows so quickly that the patient is dead before he is seen by a doctor; but many recover from the immediate illness, though, of course, they may be left with angina or with considerable limitation of effort.

The practical bearing of the differentiation of angina and coronary thrombosis is its main interest; but it is worth dwelling shortly on the history of its recent recognition as a common syndrome. Five years ago it was generally only recognised in the post-mortem room as a common termination of angina, though looking back, we can find many clinical descriptions of it in the earlier literature. Since then we have learned to recognise it clinically with great certainty. And it is not the electro-cardiogram which has taught us, though it has added most valuable information to the picture; we have learned it on ordinary clinical grounds. It should be a lesson that there must be many other conditions before us every day, waiting for someone to fit the clinical picture together and so make another equally useful advance.

The main way in which coronary thrombosis differs clinically from angina is that the pain is much more lasting. If an elderly man suddenly has pain in this same situation, which lasts for hours or even, in some cases, for two or three days, you can be almost certain, on that fact alone, that he has had thrombosis in the coronary arteries.

As a rule, patients do not keep still during the pain; they show a great tendency to move about in an effort to control the pain.

There are many other ways in which the attacks differ. With thrombosis there is much shock, and the pulse often becomes rapid and weak instead of remaining normal as it does with most attacks of angina. There is often vomiting which is very unusual with angina, though it might be suspected simply as a reflex result as in renal colic. Morphia must be used freely for the pain, as nitrites have practically no effect, and may do harm by lowering the blood-pressure still further.

These are the main differences which can be noted at once. Within a few hours, or a few days, there are sometimes changes in the rhythm, *e.g.*, fibrillation or frequent extra-systoles; or signs of congestive failure may develop.

Later there may be a pericardial rub from pericarditis over the area of necrosed muscle, but this may not occur for a few days, so is less valuable for diagnosis than the type of pain, etc. There may be a rise of temperature up to 100°F. lasting even ten days, and with it a leucocytosis up to 20,000 or 30,000 per c.mm. The pericarditis, leucocytosis and temperature, are the direct response to the necrosed muscle round the blocked artery.

Often there will be a large drop of blood-pressure with a subsequent rise during recovery. The changes in the electro-cardiogram, which will be shown with some of the cases, are diagnostic; but, as a rule, you can without that be certain as to what is happening.

You must use morphia for these cases and keep them at rest in bed for a long period. They will be ready to rest in bed for a week or two, but must have at least four weeks of this followed by prolonged quiet; it is the only reasonable treatment for such a serious condition.

In a large number of cases these patients recover. Of course, it is a dangerous condition because after one thrombosis there is a tendency to spread. After a week or so, however, there is much less chance of this, and then the immediate prognosis becomes relatively good.

ILLUSTRATIVE CASES.

Case VII, aged 59, knew he had high blood-pressure six years before, but had not any particular disability except a little giddiness and breathlessness on hills; he had never suffered any pain. One day, when he was walking to work he had a sudden pain, starting in his left arm and spreading to the middle of the sternum. He was able to walk on a distance of about half-a-mile. Half-an-hour after he got to work the pain became extremely severe, and was then in the typical mid-sternal site, rather high up, with a wide spread which included radiation down the left arm. The pain lasted about three hours and he was very collapsed, but there was no sickness until later the same evening. After the first night there was never any severe pain again. There was some sickness on the second and third days, and his temperature was raised for five days, and his blood-pressure which had been 200 fell to 145. The electro-cardiographic changes are shown in Fig. 3. He made a gradual recovery and has remained free from pain, leading an easy life at home. (*See* Figs. 3 and 4.)

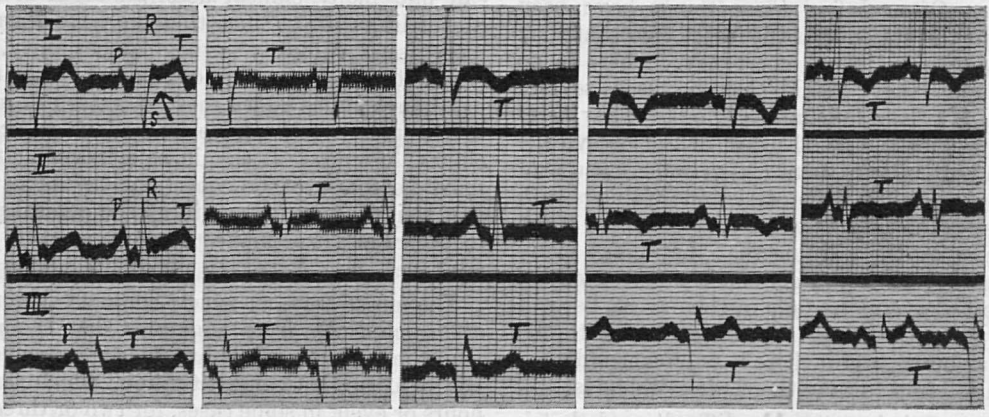


Fig. 3.

Series of electro-cardiograms (*a*) 3 days, (*b*) 10 days, (*c*) 2 weeks, (*d*) 3 weeks, and (*e*) 14 weeks after a coronary thrombosis. (Case VII, *see* text.) (*a*) Shows the absence of the usual iso-electric period just after the QRS wave in Lead I, and the others show the increasing inversion of the T wave in Lead I, the temporary inversion of the T wave in Lead II, and the return to normal of the T wave in Lead III.

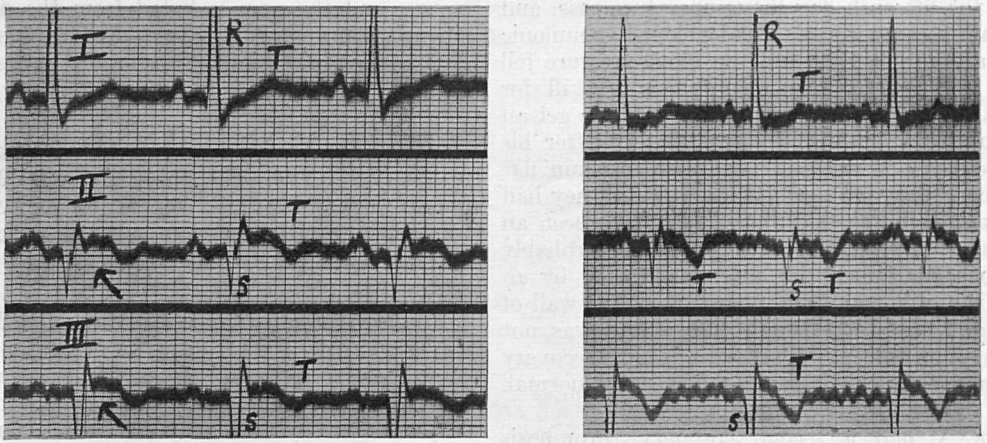


Fig. 4.

Electro-cardiograms from a man, aged 50, with high blood-pressure, (*a*) 5 days, and (*b*) 3 weeks after coronary thrombosis. (*a*) Shows well (this time in Leads II and III; compare Fig. 3, Lead I) the absence of the iso-electric period and the rounded T waves which are characteristic of coronary thrombosis; in (*b*) they have become deeply inverted.

Case VIII is important as illustrating the good prognosis in some of the slighter cases. He was 69, and had always had good health. The original attack must have been a small thrombosis, because the pain was not much more severe than the angina from which he subsequently suffered, whenever he walked about a quarter of a mile; indeed, it could not have been diagnosed without the changes in the electro-cardiogram. In January, 1927, when I first saw him the T wave was inverted in Lead II and deeply inverted in Lead III. Two months later it was upright in Lead II and less inverted in Lead III, and after another two months it was almost flat in Lead III. It gradually became upright so that after a year the electro-cardiogram was entirely normal, except for the preponderance of the left ventricle which had always been present.

When I first saw him he had suffered from angina for two months. His blood-pressure was raised, 190/105, there was no valvular disease and the Wasserman reaction was negative. X-ray showed that there was general atheromatous enlargement of the aorta with some enlargement of the left ventricle.

He was greatly helped by Tabellæ Trinitrini 1/100 gr., but after some months the pain became much less frequent without these. Recently, nearly three years after the original attacks, I found he had started work again to build a house for his son; he was able to hurry up stairs and up hills without any discomfort and had felt no pain for nearly two years. Even apart from the changes in the electro-cardiogram such a complete recovery is more compatible with a small thrombosis than with some permanent change in the coronary arteries giving rise to ordinary angina.

About eighteen months before he had any angina he had severe pains in the right hip which came on after walking a short distance and disappeared on resting; the pain was like cramp. He was treated at a surgical out-patients as possible arthritis, although X-ray examination showed no abnormality. After six months his pain entirely disappeared, but in view of what happened subsequently, it seems possible that this pain also may have been due to a small arterial thrombosis.

Case IX had a relapse and an unusual complication. Aged 51, he had some very septic teeth, and eight days after some had been extracted he was wakened up one morning with severe mid-sternal pain, which lasted for an hour and seemed as though he was being constricted in a vice; he felt as though he was going to die. The next day he walked to hospital and was found to be very collapsed with œdema and purpura of the legs. The electro-cardiogram showed a flat T wave in Lead II and an inverted T wave in Lead III on the fourth day, but five days later the T wave in Lead II was upright and the T wave in Lead III only just inverted. He steadily improved and the blood-pressure rose from 145 to 175, while the white count fell from 11,000 to 5,000, all these points confirming the diagnosis of coronary thrombosis, which before had been suspected, but not proved.

On the fifteenth day his temperature rose, and he again became worse. He developed pneumonic signs at the left base and the blood-pressure fell from 175 to 115. He was dangerously ill for several days, so that it was not possible to get an electro-cardiogram till the twelfth day after his relapse. The T wave in Lead II was again flat and the T wave in Lead III inverted, as they had been originally, so that there must have been an extension of the original thrombosis. Probably the consolidation of the lung was started by an embolism of a mural thrombosis from the wall of the right ventricle, though the picture was not typical of embolism. He made a gradual recovery and the electro-cardiogram again become normal.

CASE X had a second coronary thrombosis which was of an unusual type. In 1925 he had an attack of anginal pain and vomiting, which lasted two or three days; so here was a picture of coronary thrombosis. I did not see him then and I have not many details. He was then only 40, but had a negative Wasserman. He gradually improved, but did not feel as well as before, and was still limited in regard to what he could do, and still had pain when he started to go uphill. At golf he often had pain while playing the first two or three holes, but not afterwards.

The second attack, two years later, was of a very different type. He was driving home in his car when he came over faint and felt that he could not go on. He had some pain, but not very severe, and the pain radiated from the ordinary site up to the angles of the jaw. Waves of faintness kept coming over him. Fortunately, a friend was driving behind and found him in his car at the side of the road.

When seen by the doctor an hour or two after his arrival home, the pulse-rate was 27. He appeared very ill; his temperature for ten days was 102°F., and there were signs of pericarditis. After a few days his pulse returned to its usual rate and he steadily improved.

An electro-cardiogram taken three months later was similar to Fig. 5(b). The heart block had completely disappeared. Such changes of rhythm are not uncommon after coronary thrombosis; frequent extra-systoles are much the most frequent finding (*see* Fig. 6), and fibrillation, flutter, or heart block may also occur; only very rarely do they persist.

The differential diagnosis from angina has been dealt with fully, but sometimes when the site of the pain is rather low, the cases may be mistaken for abdominal emergencies; this should not occur if coronary thrombosis is remembered.

The treatment is absolute rest and morphia, and it may make the difference between life and death. Where there are any signs of failure digitalis should be given in effective doses, but little attention need be paid to the irregularities of the pulse since they tend to be transient.

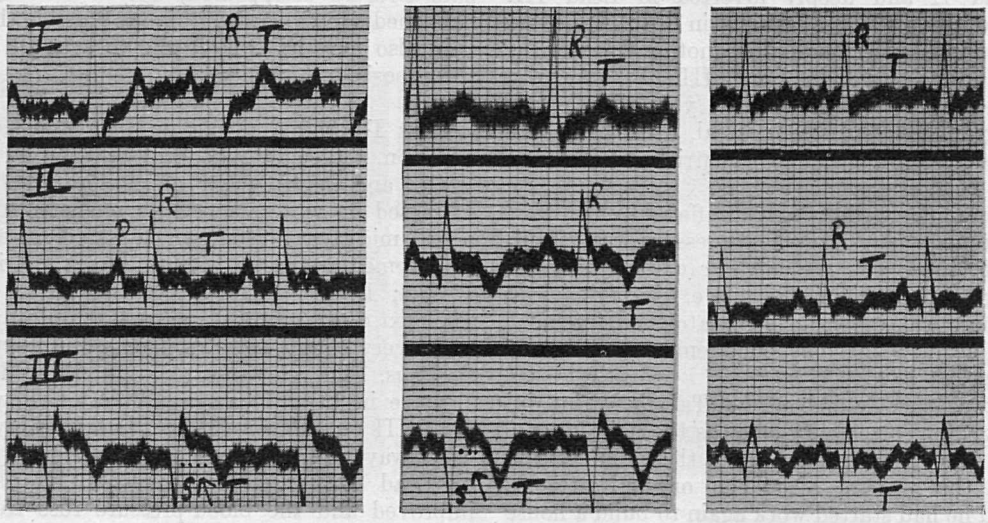


Fig. 5.

Electro-cardiogram from a man, aged 54, (*a*) 5 days, (*b*) 12 days, and (*c*) 14 weeks after coronary thrombosis. His temperature was raised for 4 days up to 102, his white count rose to 29,000, and his systolic blood-pressure fell from 160 or higher to 90. He gradually recovered after three months, but a year later he could do little without severe angina.

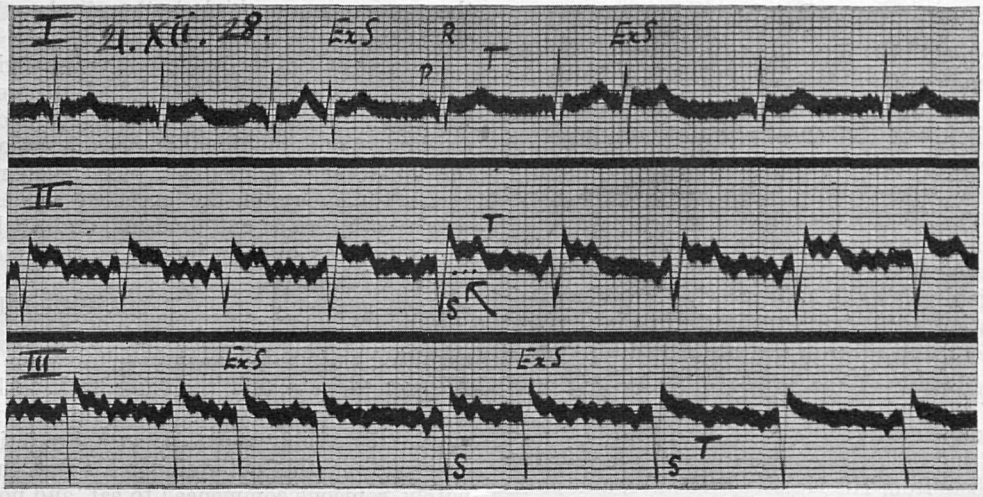


Fig. 6.
Electro-cardiogram from a man, aged 62, one day after coronary thrombosis, with characteristic S—T waves interval in Lead II. The pulse was at first so irregular that he was thought to have fibrillation, but later it became more regular, though still frequently interrupted by extra systoles from the auricle. He improved for a short time, but died on the seventh day.

Many cases die before a doctor can arrive, but it is reassuring to remember that the majority of those who live so long will recover from that attack. The cases I have quoted are, on the whole, the less severe ones, as judged by their immediate signs and symptoms, and by their ultimate prognosis.

Christmas in the Wards

Addison

THE very enjoyable concert in Addison on 27th December was admirably calculated to suit each taste, and during the pauses, the audience was able to saunter round the studio, for such was the disguise of the ward, admiring the many *objets d'art* so tastefully displayed.

The Cabaret from the Queen's Hotel, Leicester Square, opened the proceedings and delighted all and sundry ; after several items of music had been rendered by the orchestra, various choreographic representations, many accompanied by song, were executed with consummate skill to the great pleasure of all present. Mr. H. N. W. Harley next held the universal attention with several demonstrations which showed what a poor guide in everyday affairs one's observation can be. After having exhibited to our gaze several apparently normal and very attractively coloured handkerchiefs, he proceeded to make them tie themselves together and then untie in a most bewildering manner. This was followed by a description of the properties of an Indian rope, which, having been apparently cut to pieces became whole again under our very eyes, no trace of any anastomoses being visible on further inspection which the writer carefully carried out.

We were then treated to a selection of songs. Mr. F. E. Camps contributed a song and dance which won universal applause, and which he subsequently repeated clad in the costume of a bygone time and disguised as the member of another race; while Mr. Williams, of nautical fame, sang several shanties which were very enjoyable to all present.

After tea, we were visited by several members of the Niggers, who repeated many of their successes of Christmas Day.

Messrs. J. Rowlands, Littledale and De Gruchy entertained us with music, the first-named producing the most pleasant and unexpected effects from an instrument usually employed for other purposes. Several members of the Cabaret made a welcome reappearance, and later, the Concert Party from Eyes entertained us with music. So terminated a very delightful afternoon.

Bright

IT would be difficult to say whether the dominant floral feature in Bright was intended to be dahlia or chrysanthemum, but in any case, the decorative effect was distinctly pleasing and formed an attractive setting for the highly successful concert held there on the Friday afternoon in Christmas week.

For five years in succession now Bright has been fortunate enough to have Mr. Corelli Windeatt as the organiser of its annual concert. Mr. Windeatt's association with similar concerts in Charity and elsewhere, extends over a period of exactly twenty years, and for this occasion his efforts were distinctly in the nature of a celebration of his own remarkable record.

A string orchestra, mainly composed of instrumentalists from His Majesty's Theatre, and under the direction of Mr. Windeatt himself, were responsible for most of the musical items, and their crisp rendering of the overture at once brought a professional touch to the entertainment. There followed a rapid succession of vocal and comedy items interspersed with orchestral selections and harp and cello solos, which carried a large audience through two hours of sheer delight and produced a volume of applause that must have been more than gratifying to the artists concerned.

Among the vocalists were Miss Olive Sturgess, and the Rio Harold Brenton comedy numbers were provided by the Misses Marcia Bourne and Grace Copping, also by Mr. Gus Garrick. The hand bell novelty by Miss Nellie Norway was much appreciated, while the character studies given by Miss Grace Severn went down extremely well. Much was demanded of Mr. Sterndale Bennett and his songs at the piano; no doubt both his repertory and his voice were rather strained by the time he had managed to satisfy his enthusiastic audience.

In conclusion, a brief expression of thanks and congratulation to the organiser was most heartily applauded by all those present.

Cornelius and Lazarus

ON Friday, December 27th, a most successful concert was held by Cornelius and Lazarus. Thanks to the energies of Mr. Stephen Warwick, a number of very talented artistes offered their services, many of them at a moment's notice. That their great kindness in so doing was more than appreciated by all the patients and their friends, can only be realised by the manner in which each performer was greeted and by the difficulty he had in leaving the stage. No professional claqueurs were needed in Cornelius, and the concert can, we think, be described as the best of the year.

The first half of the programme was carried out by artistes whom Mr. Warwick had gathered. At the time of writing, much water has flowed under the bridge, and individual names are forgotten in the upheaval of Christmas, but the more than pleasant memory of the excellent rendering of songs, both serious and amusing, and a whistling solo which can only be judged by the amount of applause it received.

Much against everyone's will, Sisters Lazarus and Cornelius then appeared, followed by satellites thrusting their well-known hospitality on people. At first theirs was a thankless task. Although loaded with every conceivable form of food they were often visibly repulsed, so appreciative was everyone of the entertainment. But, unfortunately, someone commenced to eat, and no sooner had he tasted the dainties than others, intrigued by this behaviour, tore their attention from the stage and assailed the edibles too. The pandemonium that now reigned had to be heard to be imagined.

In the midst of this uproar and hubbub, a familiar figure, one Mr. Peacock, well known to all frequenters of the Superintendent's Office, appeared on the platform carrying queer-shaped tubes, which my friends credibly informed me were saxophones and other kindred instruments. Close on his heels followed a band of conspirators. After a very sinister conference they sat at their various instruments and conjured music of the most infectious and tuneful nature from space. Their magic was such that they even stopped people eating to make them sing.

It really is very difficult to say how much we owed to Mr. Peacock and his colleagues for their more than great kindness in coming to entertain us and the success of the concert was greatly helped by them.

All too soon they left us and were replaced by Dr. Collins with his well-known troupe which included at least one eminent dentist.

As all things, this had to finish, and the stage was then taken by Mr. Syd. D. McClean with his banjolele and Mr. O. Ive at the piano, who both informed us of numerous highly confidential facts about their private lives, nevertheless, such is the curiosity of man that although the audience were informed "That's nobody's business," yet they shouted for more.

All those who were privileged to spend the afternoon or any part of the afternoon in Cornelius, will know what a deep debt of gratitude we owe to all those who took part in any way in helping to make the concert a success. In particular one

must mention Mr. Stephen Warwick who brought the artistes, Mr. Peacock for his band, and last, but not least, Sisters Lazarus and Cornelius. No one who had not seen them could possibly realise the hard work put in by these two, particularly as they were in the throes of a "take-in." Without them, all would have been chaos.

Dorcas and Martha

A VERY enjoyable concert was held in Dorcas on Friday, 27th December, which was attended by patients from Dorcas and Martha and by a large company of visitors. Mr. Rutter opened the programme by playing a number of selections from his repertoire which were very well received.

Mr. Collins then burlesqued a talkie film production in brilliant style. Having co-opted a large proportion of the floating population of the ward, he cajoled, persuaded, cursed and bullied them into performing an intense drama of the eternal triangle type. He retired exhausted to recuperate in Sister's room with other thirsty souls, leaving a collapsed audience still tittering weakly.

Mrs. King and her band of entertainers then took the stage and produced a series of first-class numbers, consisting of vocal solos, instrumental solos, choruses, etc.

The Cosmo Club Entertainers then assembled behind the footlights and held their position and the audience for an hour. They affected a broader type of humour than their predecessors, which was equally well received by a permanently appreciative audience.

Interspersed with this party, we found Mr. Warwick Wright and partner, who performed a very amusing duet in which Mr. Wright managed to crowd an almost inconceivable number of words into one breath.

At the conclusion of this turn, we trekked across the Colonnade to Martha, where Sister had a plentiful supply of tea and sandwiches and cakes with which we fortified ourselves after an afternoon spent chiefly in helpless laughter. After tea we had a beautiful display of dancing by a Troupe who came at Sister Martha's invitation and to whom we are in consequence greatly indebted.

We wound up the evening with Mr. Peacock's Band, which heroically played selection after selection to us till 6.30, although its members must have been worn out, having played without ceasing all the afternoon.

At 6.30 we sang God Save the King, and the proceedings terminated with a vote of thanks to the Sisters who had so kindly provided the tea and entertainment.

Eyes

THE Eye Ward maintained its usual high standard of excellence with regard to its Christmas concert, mainly owing to the nefarious activities of the Ophthalmic House Surgeon, who sprained both his ankles in a noble cause. By the simple device of stationing himself at the Front Lodge and enticing any person vaguely resembling a pursuant of the histrionic art, he succeeded in convoying to Ruth a whole series of eminent artistes, who discovered, only too late, that their laryngeal apparatus had been imposed upon. The rôle of pacifist fell to Mr. Lees' brother conspirator, the Neurological House Physician.

It is necessary to possess the imagination of a professional critic in order to describe adequately a concert of which one obtained but an occasional glimpse from the privileged position of man off. Nevertheless, judging from the fierce and vociferous applause of the assembled multitude, each turn was adjudged a complete success and "rep. omnia" appeared to be the order of the day.

From the recesses of a somewhat hazy memory one can produce recollections of magnificent renderings of vocal efforts, humorous and otherwise, of excruciatingly funny monologues and of masterly expositions of the musician's art. So equally were the honours divided amongst the distinguished performers, that it might but give rise to professional jealousy were we to mention those artistes whom one has remembered and to omit those whom one has, by some mischance, forgotten. One episode, however, stands out in one's mind, namely, the notable performance of the members of the Queen's Cabaret, whose twinkling legs bewitched the audience.

The sentry duty of Mr. Lees having come to an abrupt termination by reason of the protestations of his ankles, the duty of entertaining the clamouring crowd devolved upon various members of the Niggers, whose efforts succeeded in bringing the concert to a wonderful climax—and termination.

Our most sincere thanks are due to all the artistes who so generously gave their time and services and to Sister Eyes, who ministered with unobstrusive efficiency to the needs of our guests.

Job

FOR the third year in succession the concert in Job was organised and produced by Mr. Simkins, assisted by his company of gallant friends. Needless to add, it maintained the usual standard of excellence, and as a programme of variety, no better entertainment could have been devised, for, as the applause testified, it was greatly appreciated by the large audience of

patients and their relations. Commencing at 2.30 p.m., we had a series of well-known songs, sung by Miss Vadden and Miss Sharping, some vigorous dancing by Miss Anita Kella, and more songs by Messrs. Densbury, Macquarie and Galpine. The impersonations by Miss Simkins, Mr. Conway, Mr. Middleton and "Jock"—especially the latter in "Ops," were very successful.

One of the most enjoyable turns was the performance of the Woodlake Sisters at the piano, in various popular melodies.

Then Mr. Littledale and Mr. de Gruchy were prevailed upon to give us their famous numbers "The Little Nipper" and "Knock'd 'Em in the Old Kent Road"—both so renowned as to need no comment. The concert finally concluded at 6 p.m. with community singing. In thanking Mr. Simkins and his friends for the very excellent entertainment, Mr. Stamm expressed the hope that they would be able to return again next year; to which Mr. Simkins replied that the number of applicants was so great, that he had considerable difficulty in pacifying those who were not selected. Much praise must be given to Sister Job, whose efficient management enabled the whole performance to run so smoothly, and whose catering coped with the no mean feat of satisfying so many thirsty and hungry individuals.

Lydia and Astley Cooper

ON the Friday following Christmas, the majority of the children in the hospital were treated in Lydia to what is now indeed a rarity, a Punch and Judy Show, furthermore, the only Royal Punch and Judy Show in the country; as in former years, this was produced through the kindness of Mr. Steward. Punch was at his best, Judy at hers and Toby was delightful, but the Showman was perhaps best of all.

Tea followed in the two wards, and then Father Christmas appeared, not down the chimney, but through the window; finally, all the children went their ways hugely delighted and altogether satisfied in body and spirit.

Mary

AT 3.30 on December 28th an eager and ever increasing multitude was gathered before an improvised stage, in one of the divisions of Mary Ward, to witness "Lord Richard in the Pantry"; unfortunately, "Lord Richard" had got lost in the wilds of Leytonstone and did not arrive until 5 p.m.

During the one and a-half hours available the audience partook of Sister Mary's excellent tea and listened once more to numerous "Nigger" songs which had been arranged impromptu, thanks to many noble members, who filled in the breach at the last moment.

We have to congratulate all the performers playing in "Lord Richard in the Pantry" on their excellent rendering of this amusing farce. Owing to the unavoidable delay in starting they had to work at full speed with as short intervals as possible in order to finish the piece.

Their reception can be better guaged by those of us who were present when one remembers the applause voted to them by a very appreciative audience.

Naaman

ON Friday, December 27th, we were greeted by a magnificently elaborate advertising campaign, for Naaman had decided to give free publicity to every conceivable type of advertisement, offering a prize for the most correct solution of the posters over each bed.

On arrival we were given tea and treated to a violin solo by Miss Loveland. Mr. Chamberlain, who then sang a song about women, seemed to come to the conclusion that he preferred batchelor parties. Other songs followed, including a fine rendering of "Annie Laurie," by Miss Selby. Thus we proceeded to the real business of the day, featuring Mr. H. N. W. Harley, the famous illusionist, with Sister as his dupe. Beginning with a talk on the nature of sympathy, illustrated by magic handkerchiefs, he proceeded to a lecture on the "Law of Levels," proving his theories with a pack of cards. He then defied the Laws of Gravity with the aid of the Magic Ball, and concluded with an exhibition of an unorthodox, but extremely effective method of tying and untying knots.

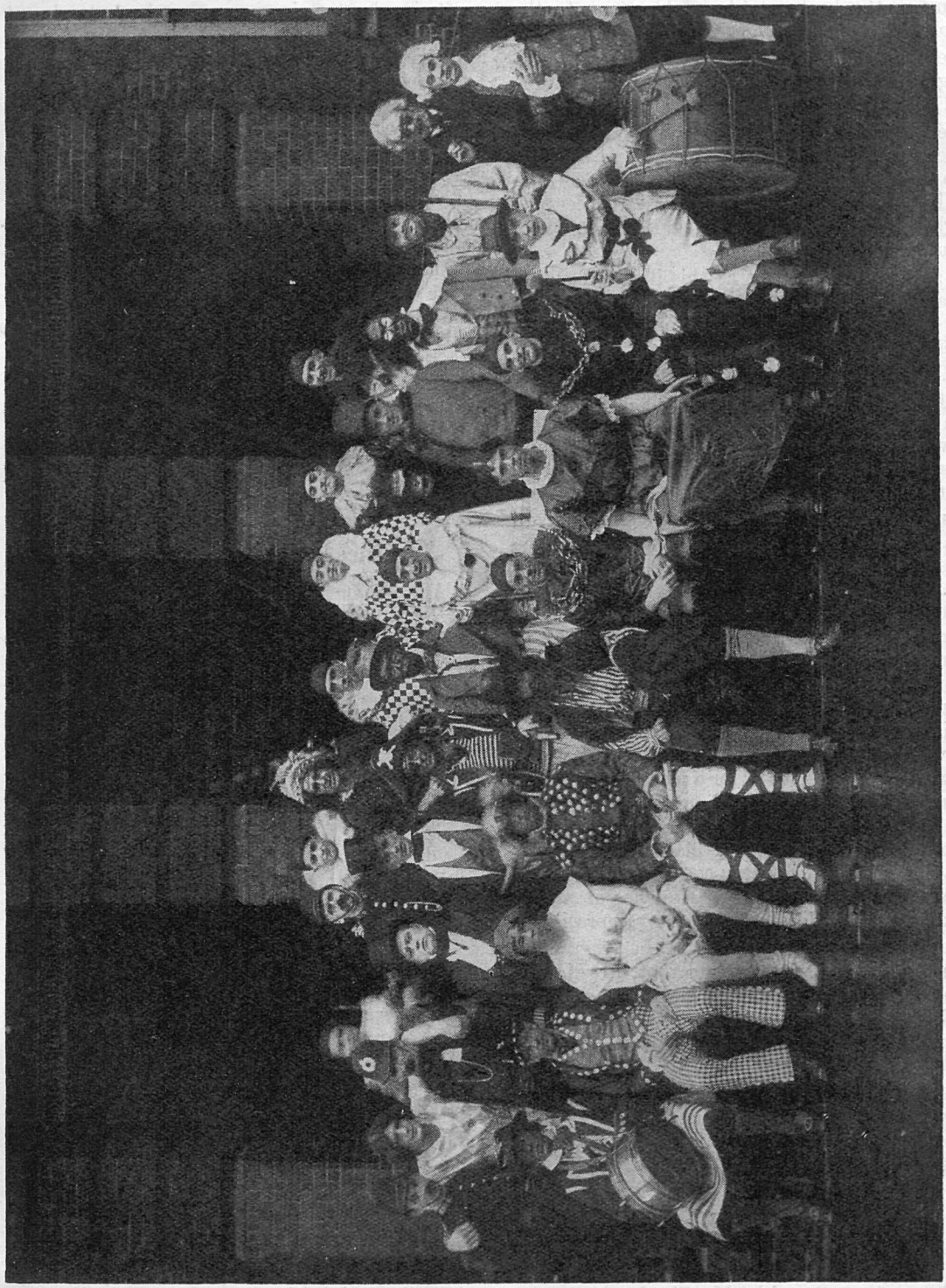
Mr. Coles' Syncopated Quintette was then followed, by way of contrast, with the International String Quartet.

The programme concluded with an exhibition of local talent in the shape of Messrs. Pitt, Camps, McClean, Littledale and Mr. John Rowlands and his saw, who produced a finale fitting to so successful an occasion.

Patience and Samaritan

THE concert in Patience on Friday, 27th December, was well up to the usual standard of excellence.

Owing to the great kindness of the various artists and artistes, both professional and amateur, who came to perform, there was no lack of talent. Indeed, the most difficult task of the afternoon was



THE NIGGERS, CHRISTMAS, 1929

to arrange that the large crowd of performers waiting in the background should go on to the platform by turns, so eager were they to help us.

The concert began with an exhibition of conjuring by Mr. Harley who succeeded in mystifying us all with his habitual self-assurance.

Then followed some songs by Messrs. Ive and McClean who accompanied themselves on the piano and banjulélé respectively. Mr. McClean and his banjulélé gave us the "Bootlegger's Daughter," his rendering of which has been one of the successes of this Christmas.

In so short an account as this it is difficult to give any idea of the excellence of the individual turns which followed each other in a bewildering sequence till close on 6.30.

Mr. Sidney Warwick arrived with a large crowd of artistes from the B.B.C. Their performance made some of our more amateur efforts appear somewhat thin, but their good humour and professional polish achieved for them a great reception from their audience.

Miss Winifred Lawson, of Gilbert and Sullivan fame, who came and sang to us, was one of the successes of the afternoon. And she deserved to be.

Another outstanding feature was an extremely clever Dance Band produced by Mr. Peacock of the Superintendent's Office. Each member of this dexterous quartet appears to be able to play any instrument. The manner in which the saxophonist and pianist change over in the middle of a tune without either stopping is a sight well worth seeing. They played for us for a whole hour, before they moved to another ward, and we wished they could have stayed longer.

Some duets by Mr. Harry Howard and Miss Hilda Seymour were another conspicuous success; and Mr. Littledale's character sketches of a type well known in this district were highly appreciated.

There were many other items in the programme which helped to pass a very pleasant three hours, notable among which were some violin solos by Mr. Rutter and some songs by Mr. Williams who accompanied his very pleasing voice on the piano.

After another turn by Messrs. Ive and McClean, the concert concluded with an extremely well received number by Mr. Norman Barber, whose last song brought the house down and formed a very suitable finish to an enjoyable afternoon.

Stephen

AT 4 p.m. on Boxing Day Stephen Ward rang with the sounds of ultra-modern music produced by Mr. Charles de Gruchy and his Band. Then followed a Concert Party organised by Mr. Clay Thomas, consisting of professional entertainers, among whom stands out in our memory a gentleman of rubicund and jovial appearance. These artistes were appreciated fully by the patients and their friends who joined in the choruses with some timidity.

There was no fixed tea interval, but those who had foregone the pleasure of the College lunch were fully repaid.

Later in the afternoon, Mr. E. T. Clifton appeared fresh from the sea, accompanying his songs with a step-dance in which he showed his complete contempt for the slippery ward floor.

The entertainment concluded with the Band once more. Mr. John Rowlands producing melodious sounds by the apparently entirely unscientific means of stroking a saw with a 'cello bow.

The patients having bid farewell to their friends, sank into an exhausted sleep, feeling only gratitude to Sister and Mr. Clay Thomas for such an enjoyable afternoon.

Overheard at the Nurses' Dance

"ARE you on Night Duty?"

"No, I am not a nurse. I'm the Superintendent's daughter. That's why I am not in Fancy Dress."

"My dance, I think."

"Well, in which room do you propose to dance? because they are playing the 3rd Extra in the large room and No. 5 in the small room, and I've booked the 3rd Extra with ——."

"Who is the man dressed as a Boy Scout?"

"Oh, he's not a Boy Scout, he's an Austrian Tyrol."

"Where shall we sit out?"

"Well, what about the Subway?"

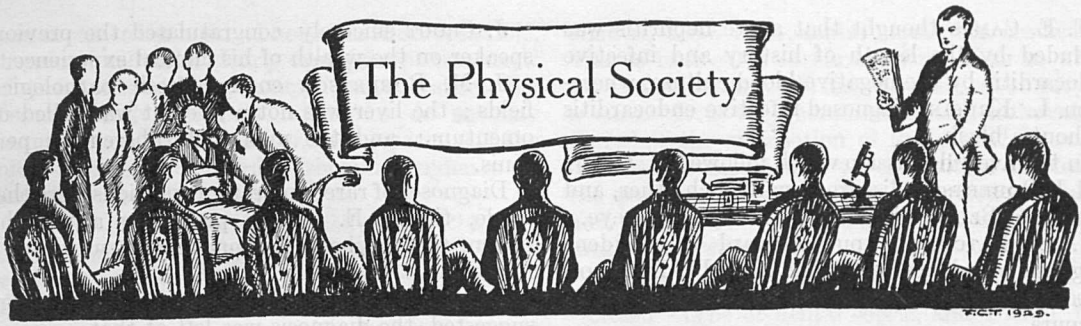
"Oh, you can't go there, that's barricaded by Red Tape."

"My partner's cut my dance. Never mind, I dance this tune much better by myself." (The Band continues to play "Singing in the Rain.")

"Can you come and see a case with me during No. 12?"

"What's the matter with it?"

"Well, I think it's a question of irrigating the tonsils."



A CLINICAL and pathological meeting was held on Thursday, December 12th, Mr. F. E. Camps being in the chair. He had assembled several interesting lumps and bumps, which baffled most of the people present at the meeting. It was noticeable that most of the Residents were not present (they were rehearsing for the Niggers); and that the discussions were carried on with less levity than usual.

Mr. J. CROOT showed the first case, a girl who for six months had had increasing pes cavus in both feet with wasting of her peroneal muscles.

P. V. Reading diagnosed an obvious case of anterior poliomyelitis, whereupon J. Croot proved that the girl was suffering from an abortive attack of progressive muscular atrophy, and quoted Dr. Symond's statement that the condition was far more prevalent than text-books would suggest. In reply to a query by Dr. Hampson, he advised rest, massage, exercises and a "Steindler on the sole."

Dr. Hampson agreed on the value of rest and pointed out that a low blood calcium was very frequently present in these conditions.

Mr. SHELDON told the story of anelderly man who after several years of liver and "liveroid" therapy for Addison's anæmia, had developed a cancer of his stomach.

To a diffident enquiry by D. Erskine, F. E. Camps replied that his tender heart had prevented him from subjecting so ill a man to a test meal.

P. V. Reading had felt large knobs on the liver before the patient had refused to play any more, and had buttoned his pyjamas up.

F. Todd wondered if he had been alcoholic in his youth.

F. E. Camps congratulated the first and reassured the second speaker, and pointed out the interesting fact that the man had definitely improved on liver while he was suffering from a cancer of the stomach.

After K. Bloom and F. Todd had disagreed with each other several times, Dr. Hampson rose, denouncing liveroids, and he suggested that the only effect of giving these drugs had been to hasten the growth of the tumour.

The meeting was then delivered into the hands of the surgeon, and an acrimonious dispute on the value of gastro-enterostomy followed.

Mr. CAMPS showed a Russian Jewess. A lump in her thyroid had appeared following childbirth and had been removed. Not to be frustrated, the lump reappeared twenty years later and had spread into the mediastinum, as was shown by her dyspnœa and by X-ray examination.

Diagnoses were made in rapid succession by various speakers:—Hodgkin's disease, myxœdema, toxic adenoma and lympho-sarcoma.

F. Todd advocated radical removal, no matter what the tumour was. K. Bloom then disagreed with him.

F. E. Camps closed the debate, praising "Derbyshire Surgery for Derbyshire Necks."

Mr. CANTOR showed a young Italian with a transverse lesion of the cord; a month in hospital had seen no improvement, his Wassermann reaction was negative, and what on earth was he anyway?

J. Croot located a tumour in the thoracic region and advised cisternal puncture with lipiodol injection followed later by laminectomy.

J. M. Robertson, diagnostically leaning on a weakened right arm, suggested syringomyelia in the cervical cord and pointed out the dangers of lipiodol.

After several speakers had placed the lesion higher still and lower, F. E. Camps ended the discussion with a diagnosis of infective myelitis and a very bad prognosis.

Mr. HEYWARD, who was much affected by his story, told the sad tale of a boy with chorea, mitral stenosis, hæmaturia and mental deterioration.

F. E. CAMPS thought that acute nephritis was excluded by the length of history and infective endocarditis by the negative blood culture, whereupon L. KRUSIN diagnosed infective endocarditis without a blush.

In the lively discussion which followed, J. CROOT and J. ROBERTSON disagreed with each other, and TODD and BLOOM did not see exactly eye to eye.

J. S. BATCHELOR put forward a confident diagnosis of tuberculous kidney, and Dr. HAMPSON closed the discussion with a suggestion of renal purpura.

MR. HEYWARD'S *second tale was equally sad;* a motor driver, who had in his youth suffered from colitis, now had a large liver and was rapidly wasting.

F. E. CAMPS rose and revealed that there was a round tumour lying under the mucous membrane of the rectum, but not ulcerating into the gut.

F. TODD, with a noble scorn of rectal tumours, diagnosed obvious cardiac failure.

K. BLOOM disagreed entirely. Everything was explicable on the grounds of a carcinoma recti following colitis. He himself had seen it happen before.

J. CROOT sincerely congratulated the previous speaker on the wealth of his clinical experience.

J. M. ROBERTSON entered fresh pathological fields; the liver was not a liver, it was rolled up omentum; and the man had tuberculous peritonis.

Diagnoses of rarer and rarer conditions were then made, till F. E. CAMPS, producing a palpable spleen, to everybody's astonishment, suggested a leukæmia.

As everything but mumps had been by now suggested, the diagnosis was left at that.

MR. C. K. SIMPSON then demonstrated two post-mortem specimens, one a dermoid in the chest of an infant, the other a mixed cell sarcoma, which had apparently sprung from the right suprarenal and had formed a huge mass in the mediastinum. As he had evidently read all the books on the subject and backed his diagnosis with a wealth of literature, no one dared to argue.

The hour was now late and the Chairman then closed one of the most enjoyable meetings of the year.

P. V. R.

The Role of Bacteriology in Dental Surgery

A Clinical Lecture, November, 1929, by A. Bulleid, Esq.

GENTLEMEN,—I am particularly anxious that the title of my talk to you to-day shall not be misleading. I do not intend to offer you a bacteriological treatise which might or might not interest you, but which would be of little practical importance to you; rather shall I try to draw a picture of the effect of dental sepsis on the general well-being of the body and make an attempt to show how bacteriological investigations can help in diagnosing and treating the conditions which arise. I shall also have the temerity to give you a few practical details of how bacteriological investigations should be carried out either by yourselves or by the bacteriologist in attendance.

It is now a recognised fact that practically all the diseases we know are due to the activities of micro-organisms, and it is with these that bacteriology deals. In other words, bacteriology deals with infection and its results, and by infection we mean the invasion of the living tissues by micro-organisms which grow and multiply at the expense of the host. May I particularly draw your attention to the word "invasion"—the micro-organisms invade the tissues and do not remain on the outside. The disease-producing powers of the micro-organisms are due to th elaboration of chemical products termed toxins and these poisonous substances may have such a slight effect as to cause no general symptoms—as in the group of "local" infections or may be very intense as in such conditions as septicæmia or pyæmia, that is, general infections. In the former group a good example is furunculosis caused by the staphylococcus in which there is very little tendency for the micro-organisms concerned to enter the blood stream. In the latter group, good examples are typhoid fever or streptococcal septicæmia. In the "local" infections the evidence of infection is in the "local" lesion, that is, the boil and the destruction of the causal micro-organisms may be restricted to the site of inoculation or the related lymphatic glands. In the "general infections" the local manifestations at the site of inoculation may be so small as to escape detection and yet the "general" symptoms may be most severe. It is pertinent to remark here that most severe dental lesions are streptococcal and streptococci show a marked tendency to invade the blood stream. Obviously, therefore, the "site of inoculation" is most important because it is at this focus that the micro-organisms

gain access to the host. I hope this short preamble, therefore, will show clearly that prompt treatment of the "site of inoculation" may restrict the disease locally, whereas failure to do so may permit general symptoms to arise especially if the micro-organisms concerned show a tendency to pass into the blood quickly.

In the mouth we deal chiefly with "local" lesions, such as caries, gingivitis, and possibly most would include pyorrhœa in this category. Efficient treatment, therefore, of these local lesions should be directed towards prevention of the invasion of the blood stream by the micro-organisms concerned. Luckily in caries and in most cases of gingivitis this is not difficult, so that the question of systemic infection does not arise. I think, however, it is wise to note here that the first point of bacteriological interest which arises in these "local" lesions is that directly the sepsis is established the actual bacterial flora changes. These changes consist not only in an actual numerical increase in the number of bacteria present, but also in a change of virulence so that micro-organisms which normally are of low virulence or, possibly, non-pathogenic have their toxicity markedly increased. The inflammatory condition of the oral mucosa leads to stagnation chiefly around the teeth, and in these stagnation areas the bacteria find a rich pabulum in which to increase, and so the inflammatory condition is kept up. Increase in the inflammation allows the organisms to invade the tissues, so that they and their toxins may thus be carried to other parts. In other words, an untreated "local lesion" may now have caused a general spread of the infection. Most of these inflammatory conditions of the oral mucosa are streptococcal in origin, so if not promptly treated infection may be carried to other parts of the body.

The two types of dental sepsis that we are called upon to treat may be conveniently divided into "open" and "closed." The former is the more easily diagnosed and treated, and here the routine making of "gum smears" is, to my mind, exceedingly important as it yields valuable data on which treatment can be constituted. It is not difficult to picture the effect of open sepsis on the general system. The micro-organisms can be carried in the saliva over the whole of the mouth by continuity of tissue. They may be carried into the pharynx and larynx. They can be inhaled and carried into the lungs, and they can be swallowed and carried down into the intestinal tract. If, therefore, organs become infected and chronic inflammatory conditions become established, it is often most difficult to obtain a cure of the lesions established unless the primary focus, that is, the "open dental sepsis" is eradicated. This is noticeable in chronic bronchitis in which untreated dental sepsis may be sufficient to prevent a cure. It is very common indeed, however, to find that the extirpation of the primary focus of infection is insufficient to completely desensitise the patient unless it has been carried out early, and it is in such cases that efficient vaccine treatment meets with success.

It is, however, quite another picture with the "closed" type of dental sepsis, and I think that it is in this type that bacteriological investigations give the most satisfactory results.

I suppose that the commonest type of closed sepsis is that associated with the dead tooth, but it must not be forgotten that a pyorrhœic tooth, in addition to being an open drain, is also a partly closed one as well.

Apical sepsis is, of course, present in pyorrhœic teeth, and it is quite possible to find granulomata attached to the roots of such teeth as I have myself discovered.

It will, however, be accepted that the apical osteitis which is most commonly met with is associated with dead teeth. I do not intend to discuss the various types of apical infection which we group together as "apical osteitis," and would merely content myself with saying that they are primarily streptococcal, though occasionally the infecting streptococcus is associated with a staphylococcus.

I am becoming more and more convinced that radiographic evidence of infection by itself is inadequate in that it gives no clue whatsoever as to the extent or danger of the infection present. A large area of osteitis at the apex of a dead tooth is undoubtedly positive evidence of infection, but a dead tooth which may show no abnormal radiographic picture may be the source of a much more potent infection. The same may be said of the alveolus around live teeth on occasions. I do not wish in any way to detract from the undoubted value of radiography in aiding us in our diagnosis, but I do think that it sometimes fails to reveal the presence of dangerous infections. There is no absolute fool-proof method of assessing the extent of an infection or the amount of toxic absorption that may take place in any case, and it is only on the effect produced systemically that any guesses at the intensity of the infection may be gauged.

I do not think that any method, however perfect, can permanently sterilise a dead tooth, and to my mind a dead tooth is always a dangerous tooth, in that it is at least always a potential source of infection.

May I now make an attempt to draw a picture of what happens in and around the dead tooth showing apical osteitis, and how the infection present may be carried by the blood or lymph to other parts of the body. From the actual area shown in skiagram, bacteria and their toxins may pass direct into the vessels in the alveolus and so join the systemic circulation. In most cases the number of bacteria tipped out into the main circulation is not sufficient to cause a general septicæmia, and cultures from the blood, in most cases, would prove sterile even though there might be a few circulating bacteria. In most cases, the bacteria are content to remain in the focus of infection and pour out their toxins into the blood stream so that most of the systemic lesions associated with dental infections are those of toxæmia and not septicæmia.

The same picture may be drawn as to what is taking place to possibly a less extent from micro-organisms in the periodontal membrane of the infected tooth and also probably from the micro-organisms left alive in the dental tubes. The dead tooth is, therefore, rather like a railway junction which pours out its trains into all directions, in most cases the trains being the toxins of the bacteria concerned. I have already stated that the chief infecting group of micro-organisms found in areas of apical osteitis is streptococcal, but it is quite impossible to state from the type of streptococcus found as to the nature of the toxin produced. In some cases, the toxins may cause a general debility (a very common sequel of dental infection), in others a fibrositis, in others a myalgia, and in others, arthritis, and so on.

It is rare to find dental infection associated with "acute" diseases in other parts of the body—in practically all cases it is associated with chronic lesions elsewhere.

This is explainable to some extent by the fact that the streptococci associated with dental infections are, as a rule, of fairly low virulence, though this does not in any way detract from their importance, and, in fact, makes them rather more important because they rarely kill, but always maim. Another point which to my mind makes the dental infections so important is that they lead to extraction of the teeth as the means of attempting a cure, and this is mutilation to the patient. The patient does not suffer much mutilation by the removal of tonsils or appendix, but he does suffer by removal of teeth. It is, therefore, to my mind, vastly important that some clue to the amount of danger run by the patient should be gained before teeth are sacrificed "in speculation."

It is in this field that bacteriological investigations help, not only in diagnosis, but in subsequent treatment. Anyone can get a streptococcus from any mouth, and unless some attempt is made to assess its possible importance in the infecting rôle very little practical information is gained. If, however, proof of infection of the blood stream is forthcoming, then something tangible is gained, and if this is coupled with further proof by an examination of a differential leucocyte count, then the presence of the isolated streptococcus really becomes important. Let us picture infection passing into the blood stream from certain infected teeth, that is, teeth which clinically and possibly radiographically are suspicious. Choose for preference one of the teeth which is in the upper jaw, and, if possible, single rooted :—

(1) Carefully sterilise the supporting structures, and either under local or general anæsthesia, extract the tooth.

(2) Culture from the apex and isolate the infecting streptococcus.

(3) Take a specimen of blood from the patient, let it clot and remove the serum.

(4) Make a blood film on a slide for the differential leucocyte count.

Carry out agglutination experiments with the infecting streptococcus as antigen. Positive agglutination is definite proof of antibody formation, therefore proof of infection of the blood. If the differential leucocyte count gives a picture of a lymphocytosis, this is strong supporting evidence of chronic bacterial infection fitting in admirably with the serological findings. In the light of these positive findings then the extraction of teeth showing clinical and radiographic evidence of infection, and these include all dead teeth even if radiographic evidence is inconclusive, is entirely justified.

If the dental infection is associated with a chronic systemic lesion elsewhere of some long duration then the removal of the primary dental focus may itself fail to cure the systemic lesion, and in these cases autogenous vaccine therapy is most useful.

Of course, it must be obvious that if the dental infection is only one of the foci from which infection has entered the body, then its eradication in itself will be sufficient to effect cure. All suspected foci must be investigated, cultures made, serological reactions undertaken and the micro-organism proved to have a connection with the disease pooled into one emulsion for the preparation of the autogenous vaccine. The remarks about eradication of the dental focus of infection will, of course, apply as far as possible to any other suspected focus of which removal is possible.

Correspondence

Team Diagnosis

To the Editor of the GAZETTE

SIR,—Diagnosis by a team of experts is to-day the fashion, applauded by consultants, and therefore humbly accepted by the general medical fraternity. It is thirty-five years since I qualified, and I have had a varied experience which has given me the opportunity of judging the effects of this collusion of many minds.

One very grave effect that this doctrine of the necessity of team work is producing on the G.P. is that he has ceased entirely to trust his own judgment. Large numbers of men now never make a diagnosis, but submit all but the simplest questions to consultants. These refer the matter to others, with the common result that an initial outlay of £3 3s. 0d. expands, not infrequently, to the prohibitive outlay of £21. The result is that the public no longer consult their private physicians but go directly to the hospitals. The inevitable corollary is that we are *all* losing the means of earning a livelihood for which we did much toil and expended much of our fathers' capital. There is now nothing gained by a man knowing his work, therefore, the younger men have ceased to attend lectures and clinical evenings. As the late secretary of a very large society, I know this only too well. Every year fewer and fewer young men attend our very important gatherings. From my case books (of the last five years for the most part), I will proceed to justify these criticisms of the present craze for team diagnosis. In a few cases, division of labour will be of the greatest benefit to the patient, but its wholesale application is, in the opinion of a great number of men, robbing the profession of its medical proficiency and scraping our pockets clean, as illustrated by the following cases.

A woman with a great swelling of her right humerus was taken to the Fellowship Examination, and nearly thirty surgeons declared the lesion to be a sarcoma. She refused to have her fore-quarter amputated. Six months' later there was no tumour. The radiologist had alone declared that it was not a cancer.

A lad of sixteen last winter fell off a toboggan and hurt his left epigastrium. He took his supper well, but at two in the morning he had violent abdominal pain. Pain was on the left side. Two consultants said that his mesenteric artery was divided or his spleen ruptured. At operation a filthy gangrenous appendix was found. One week after operation he had general peritonitis and nearly died.

I sent a man with a swollen arytenoid cartilage to a laryngologist. He referred the man to a large meeting in Hanover Square. All the laryngologists agreed that the tumour was cancerous. Having observed the case for seven weeks, I thought that they were wrong. His larynx was opened and the tumour was benign.

I excised a large hæmorrhagic mole from an old man's shoulder. The pathologist said that it was not all removed and that I must anticipate recurrence. It is two years ago—there has been no relapse.

I excised a small cyst from a man's palm. Pathologists said that there were indications of sarcoma. The operation was done ten years ago. The patient is perfectly well.

A woman was sent to hospital with a definite tumour in her right broad ligament. A large number of men agreed that it was so. When opened there was nothing in the abdomen.

The general practitioner diagnosed a youngish woman to be suffering from neurasthenia; the physician declared it to be Addison's disease. Ten years later, the woman is well.

Another remarkable case was a young woman who developed optic neuritis and deafness. Many men saw her and she was returned with a diagnosis of myxœdema. Her eyes now show complete optic atrophy and she is totally deaf. Physically she is otherwise very well.

A man was declared to be tabetic and mentally ruined by the decree. He has unequal Argyll-Robertson pupils. His knee jerks are brisk and he walks perfectly.

Here is a case where no consultant was called. Acute pneumonic symptoms appeared in a young man. Next day better. Three days later aortic to-and-fro and a mitral at the apex were heard. Next day the sounds were louder and a pulmonary bruit was added As he came of a rheumatic family, large doses of sod. salicylate were given. Two days later the heart-sounds were normal and there was much dry left-sided pleurisy. This cleared up; to day he is perfectly well.

My experiences do not differ from other men's. We must humbly confess that medicine as a precise science is very young, and that there is so much that we do not know at present and a vast field that can never be known, owing to the idiosyncracies of both the patient and the toxin. If the wide field of general practice is sterilised of the production of knowledge by the claims for team diagnosis—then the mass is injured for the benefit of the few.

Yours, etc.,

VAUGHAN PENDRED,
M.D. Dur., F.R.C.S. Eng.

Hospital Information, etc.

Pass List

UNIVERSITY OF CAMBRIDGE

1ST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES

December, 1929

PART I—Chemistry

J. R. Oliver.

PART III—Physics

L. B. Feitelberg.

2ND EXAMINATION MICHAELMAS TERM, 1929

PART II—Human Anatomy and Physiology

J. B. C. Murdoch. G. R. C. Rayner.

3RD EXAMINATION

PART I—Surgery, Midwifery and Gynæcology

E. H. Hudson.

PART II—Physic, Pathology and Pharmacology

A. T. Curnow. G. N. Wood.

Bachelor of Medicine

C. G. Townsend.

UNIVERSITY OF LONDON

M.D.

December, 1929

BRANCH I—Medicine

T. R. Hill, B.S. W. M. Ramsden, B.S.

E. C. Warner, B.Sc., B.S.

UNIVERSITY OF OXFORD

December, 1929

M.B., B.Ch.

Forensic Medicine and Public Health

R. S. Pearson.

2ND EXAMINATION, M.B., B.Ch.

J. K. Marshall. R. S. Pearson.

SOCIETY OF APOTHECARIES

December, 1929

Surgery

*B. T. Squires

Medicine

T. G. Robinson. *B. T. Squires.

Forensic Medicine

C. E. P. Davies. W. J. D'Rosario.

*B. T. Squires

Midwifery

*B. T. Squires

*Has completed the examination.

Notice

FINAL F.R.C.S. COURSE.

A Course of preparation for the Final Examination for the Fellowship of the Royal College of Surgeons of England will commence on February 24th. Guy's men wishing to join the Class should make immediate application to the Dean, in the Medical School Office.

Dec. 31st, 1929. T. B. JOHNSTON, *Dean.*

Papers by Guy's Men

C. Worster-Drought, M.D. and T. R. Hill, M.B. Neurofibroma of Cervical Region with Involvement of Hypoglossal Nerve, *Proc. Roy. Soc. Med.*, 1929–30, xxiii, 121, Clin. Sect. 13.

C. P. Symonds, M.D. (1) A Case of Familial Periodic Paralysis with Attacks of Excitement; (2) Arterial Angeioma of Brain, *Ibid.*, 97–98; *Sect. Neurol*, 9–10.

L. J. Witts, M.D., M.R.C.P. Diseases of the Liver and Spleen, *Clin. Jour.*, 1929, lviii, 601, 613.

Sir William Hale-White, K.B.E., M.D., LL.D. Post-Graduate Medical Teaching in London, *Practitioner*, 1929, cxxii, 375.

Change of Address

R. Trevelyan Jones, Lincoln House, West Road, Guildford. 'Phone 1622.

G. M. Housden, M.B., B.S. (Lond.), St. Bartholomew's Hospital, Rochester, Kent.

Appointments

E. Royston Saul, L.D.S., R.C.S. Eng., to be Dental Surgeon to Knowle Mental Hospital, Fareham, Hants.

Norman Burgess, M.A., M.D. Camb., M.R.C.P. Lond., Hon. Asst. Physician, Skin Dept., Bristol General Hospital.

The Medical Crossword Solution

H	O	S	P	I	T	A	L	G	A	Z	E	T	T	E
E	C	T	A	S	I	A	E	I	G	O	N	E	H	P
R	E	A	G	E	N	T	O	D	E	N	A	N	U	S
M	L	M	E	P	A	E	N	D	Y	A	T	O	M	O
E	L	I	M	I	N	A	T	I	O	N	U	D	B	M
T	U	N	I	C	A	R	I	N	H	E	R	E	N	T
I	S	A	P	H	E	N	A	E	I	R	A	S	A	L
C	H	E	E	R	S	O	S	S	M	I	L	I	N	G
M	A	S	C	O	T	T	I	S	B	I	G	S	O	A
S	P	L	A	S	H	E	S	P	I	N	A	R	M	S
S	P	E	C	I	E	S	W	I	N	S	G	L	E	E
M	I	E	N	S	T	R	I	P	E	M	A	I	L	S
E	E	P	I	P	I	A	L	R	U	A	N	N	U	L
L	R	C	P	A	C	I	D	A	G	R	E	E	S	I
T	E	N	S	E	B	R	I	G	H	T	W	A	R	D

Births

JONES—On November 25th, 1929, to Jean (née Milne), wife of J. Emrys Jones, "Gowerdale," Llandudno (in London)—a daughter.

HURST—On Christmas Eve, 1929, at Heath End, Ascot, to Cushla, wife of Arthur F. Hurst, M.D., F.R.C.P.—a son.

BROCK—On December 23rd, 1929, to Germaine Louise, wife of R. C. Brock, F.R.C.S., Thornton House, Hendale Avenue, Hendon, N.W.4—a daughter.

Marriage

ROCHE—HENRY—On October 23rd, 1929, at St. Mark's Church, Auckland, New Zealand, Edward Henry Roche, M.C., only son of Mr. and Mrs. H. Roche, of Cambridge, New Zealand, to Barbara Hay Henry, daughter of Mr. and Mrs. J. B. Henry, of Renuera, Auckland.

GUY'S HOSPITAL MEDICAL SCHOOL.

TIME TABLE. SPRING TERM, 1930.

SUBJECTS FOR FINAL EXAMINATION. MEDICAL.

Subject	Lecturer	Days and Times	Place	First Class or Lecture
Surgical Pathology	Mr. Davies-Colley	Mon. and Thurs. at 5 p.m.	Museum	Thursday, January 9th
Medical Pathology	Dr. Campbell	Mon. at 4 p.m. and Wed. at 9.30 a.m.	Museum	Monday, Jan. 13th
General Pathology	Prof. Donaldson	Lectures—Tues., Thurs. and Fridays at 12 noon Practical—Daily at 9 a.m.	Pathol'cal Theatre Path'cal Class Rm.	Tuesday, Jan. 7th Monday, Jan 6th
Ophthalmology	Mr. Ormond	Thursdays, at 4 p.m.	Anatomical Theatre	Thursday, Jan. 9th
Public Health	Dr. G. F. Buchan	Fridays at 4 p.m.	Pathological Th'tre	Friday, Jan. 10th.
Applied Anatomy	Professor Johnston	Wednesdays at 12 noon	Demonst'n Theatre	Wednesday, Jan. 8th

ORGANIC CHEMISTRY, ANATOMY, PHYSIOLOGY AND PHARMACOLOGY.

Subject	Days and Times	Place	First Class or Lecture
Organic Chemistry (2nd M.B., Part I)	Lectures—Weds. & Fridays 9.30 a.m. Practical—Mons. 2–5 p.m. & Thurs. 10–1 p.m.	Chemistry Theatre Chemistry Laboratory	Wednesday, January 8th Thursday, January 9th
Anatomy	Senior Lectures (Embryology)—Tues. and Thurs. at 9.30 a.m. Elementary Lectures—Mons. 9.30 a.m. Weds. 11 a.m. Practical Anatomy—Daily from 9.30 a.m. to 5 p.m. Revision Classes—To be announced later Normal Histology—Tuesdays at 2 p.m.	Anatomical Theatre Anatomical Theatre Dissecting Room Demonstration Theatre Histology Laboratory	Thursday, January 9th Wednesday, January 8th Tuesday, January 7th To be announced later Tuesday, January 14th
Physiology	Elementary Chemical Physiology (All Junior Students) Fri., 11–1 p.m. Sat., 10–12 noon Advanced Experimental Physiology (Senior M.B. Students) Mons. and Weds., 11–1 p.m. Clinical Physiology (All Students) Thurs. 12–1 p.m.	Chemical Physiological Laboratory Experimental Physiological Laboratory Clinical Theatre	Friday, Jauary 10th Monday, January 13th Thursday, January 9th
	Tutorial Classes, Elementary—(Junior Medical Students) Advanced (All Senior Medical Students)	To be arranged	To be arranged
Pharmacology	Mons., 4 p.m. Fridays, 1.15 p.m.	Physiological Theatre	Friday, January 10th

CHEMISTRY, PHYSICS AND BIOLOGY.

Course	Subject	Lectures	Place	Practical Classes	Place
Pre-Medical Conjoint	Inorganic Chemistry	Tues. & Thurs. 9.30 a.m. First Lecture, Tues., Jan. 14th at 9.30 a.m.	Chemistry Theatre	Thurs. 2–5 p.m., Fri. 10–1 p.m. First Class Thurs., Jan. 9th	Chemistry Laboratory
	Elementary Organic Chemistry	Thurs., 2 p.m., Fridays 12 noon First Lecture, Thurs., Jan. 16th	Chemistry Theatre		
	Physics	Tues. & Thurs., 10.50 a.m. and Tues. 12 noon. First Lecture, Thurs., Jan. 9th	Class Room IV	Mons. 10–1 p.m. and 2–5 p.m. First Class, Mon. Jan. 13th	Physics Laboratory
Conjoint	Biology	Weds. 9.30 a.m., Thurs. 12 noon, Fri. 9.30 a.m. First Lecture, Friday, Jan. 10th	Biological Laboratory	Mons. & Fridays 2–4 p.m. First Class, Fri., Jan 10th	Biological Laboratory
M.B. London	Chemistry	Tues. & Thurs., 9.30 a.m. First Lecture, Tues. Jan. 14th	Chemistry Theatre	Mons. 10–1 p.m., Tues. 2–5 p.m. First Class, Mon., Jan. 13th	Chemistry Laboratory
	Physics	Tues. & Thurs. 10.50 a.m., and Tues. 12 noon. First Lecture, Thurs., Jan. 9th	Class Room IV	Thurs. & Fr.days, 2–5 p.m. First Class Thurs., Jan. 9th	Physics Laboratory
	Biology	Weds., 9.30 a.m., Thurs., 12 noon, Fri., 9.30 a.m. First Lecture, Wed., Jan. 8th	Anatomical Theatre	Weds. & Fridays, 10–1 p.m. & Sats., 11–1 p.m. First Class, Wed., Jan 8th	Biological Laboratory

GUY'S HOSPITAL DENTAL SCHOOL

TIME TABLE—SPRING TERM, 1930.

Subject	Lectures	Place	Practical	Place
INORGANIC CHEMISTRY	Tuesdays and Thursdays at 9.30 a.m., commencing on Tuesday, January 14th	Chemistry Theatre	Thurs., 2–5 p.m., Fridays, 10–1 p.m., commencing on Thursday, January 9th	Chemistry Laboratory
ELEMENTARY ORGANIC CHEMISTRY	Thursdays, 2 p.m., Fridays, 12 noon, commencing on Thursday, January 16th	Chemistry Theatre		
PHYSICS	Tuesdays and Thursdays at 10.50 a.m., and Tuesdays at 12 noon, commencing on Thursday, January 9th	Class Room IV	Mondays from 10 to 1 p.m., and from 2 to 5 p.m., commencing on Monday, January 13th	Physics Laboratory
ANATOMY	(1) *Junior Lectures*— Mondays at 9.30 a.m., Wednesdays at 11 a.m., commencing on Wednesday, January 8th (2) *Demonstrations*— *(*a*) Bones— Tuesdays at 10.30 a.m., commencing on January 14th *(*b*) Soft Parts— Thursdays at 9.30 a.m. and Fridays at 10 a.m., commencing January 10th	Anatomical Theatre Anatomy Demonstration Theatre Anatomy Demonstration Theatre	Daily from 9 a.m. to 5 p.m., commencing on Tuesday, January 7th	Dissecting Room
PHYSIOLOGY	Thursdays, 10.30 a.m., commencing on Thursday, January 9th	Physiology Theatre	Thursdays at 11 a.m., commencing on January 9th	Physiological Laboratory
HISTOLOGY	Thursdays at 2 p.m. Commencing on Thursday, January 16th	Histology Laboratory		
PRACTICAL SURGERY	Times already notified			
GENERAL SURGERY	Tuesdays at 1.15 p.m., Thursdays at 3 p.m. Fridays at 1.15 p.m. commencing Tues., Jan. 14th	Class Room IV Class Room IV Clinical Theatre		
DENTAL SURGERY ..	Tuesdays at 4.15 p.m., commencing on January 7th	Anatomical Theatre		

* N.B.—New Regulation L.D.S. Students in their Second Term of Human Anatomy must attend (*a*) and may attend (*b*) if they so desire.
Old Regulation L.D.S. Students and New Regulation Students in their Third Term of Human Anatomy must attend both (*a*) and (*b*).

EDS. { J. B. B.
P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *25th January* 1930 *Number* 1083

PASSIM

WITH the Inter-Hospital Cup-ties now so near at hand, the fine form shown by the First Fifteen last Saturday in their game with Birkenhead Park is not only heartening to the team itself, but to all those who wish them success in their coming fight to retain the Cup.

With a sturdy, hard-working pack, the halves and three-quarters are assured of seeing plenty of the ball; J. E. Giesen, a newcomer to the side since last year, has been playing well throughout the season, but the appearance of Guy Morgan, in the centre also added a dash and sparkle to the line not previously seen, while T. G. Robinson and A. G. Johnson on the wings are both fast. L. Wailer has been playing a very safe game at full-back. The chief doubt in the composition of the fifteen lies at half, where J. Howell has been playing excellently in partnership with Windsor H. Lewis, in the absence of R. J. Eustace.

All who saw Saturday's game are unanimous that few, if any, finer have been played at Honor Oak Park. We wish the side all success and no ill-fortune, and though the unexpected happening is not infrequent in Inter-Hospital games, we fully expect to see T. G. Robinson claiming the Cup again for Guy's. In the first round, we meet Middlesex on Tuesday, 4th February, at Richmond. The winners play the winners of King's and St. Thomas's a fortnight later.

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IN every way the Annual Residents' Ball, held at the May Fair Hotel, on Tuesday last, was a complete success. There were more people than even last year, and the whole dance went with a swing that must have been very gratifying to those responsible for the arrangements. It was extremely unfortunate that Mr. F. E. Camps, who along with Mr. R. Glanvill had done most of the work, should have fallen victim to the juvenile complaint of mumps only the day before; he has our sympathy. Received by Mrs. Mollison at 9.30 p.m. we footed it gaily until the hour of 2.30 a.m., to the strains of a very excellent band, except for an interval for supper which we can only say was on a par with the music.

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WE should like to take this opportunity of offering our hearty congratulations to Mr. H. J. B. Atkins on being awarded the Hallett Prize in connection with the recent Primary Fellowship Examination. This feat is one of which, not only Mr. Atkins himself, but also the Medical School, has every reason to be proud, for although he came to Guy's with a distinguished record from Oxford, his preparation for the Primary Fellowship was conducted at Guy's, and it is gratifying to be able to infer that the Primary Course is capable of attaining the same high standard for which the Final Fellowship Course has for some years past been renowned.

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ANYONE who happened to be walking down the Colonnade last Saturday might have jumped to the conclusion that Guy's were trying to revive the Dress Reform Movement, for he would have beheld some dozen of the flower of Guy's manhood, tail-coated, top-hatted, white-spatted, fancy-vested and be-stocked. He would have been needlessly alarmed, for the underlying cause was not the bursting of a latent æsthetic bud, nor a defiant attempt to emulate the sartorial subtleties of their seniors on the staff, but a more natural, more joyful and more healthy motive—the wedding day of Mr. Ernest H. Sears. Mr. Sears, whose resignation before Christmas both from his appointment as Dr. Poulton's H.P. and his office as President of the Residents, was accepted with much regret, possessed both charm and personality sufficient to enable him to lead a Nigger's Practice as easily as he could lead Dr. Poulton through the Park. We wish him every happiness and success.

For ten days or more, Bright and the adjacent medical wards have been treated to nightly lullabies from the region of the "Eye floor"; rehearsals for the Residents' Play have started in earnest. As in previous years, the play will be produced on four nights starting Tuesday, 11th February, with a dress-rehearsal on the previous night. It is early days yet to speculate as to the standard of excellence to be attained this year, but time will show its quality. Applications for tickets, which are limited, should be made to Mr. J. C. Heather, The College, not later than 29th January.

We should like to remind our readers that the annual subscription to the *Gazette and Directory of Guy's Men* (12*s.* 6*d.* post free), is now due, and should be forwarded to The Manager, The Gazette Office.

The *Directory of Guy's Men* (*Medical and Dental*) is now ready for distribution, and all subscribers to the *Gazette and Directory* will receive their copies through the post.

Subscribing members of the Clubs' Union are entitled to a copy of the *Directory*, which may be obtained on application at the Wills Library.

Non-subscribers may obtain a copy at the Gazette Office (Counting House), Guy's Hospital, S.E.1, price 2*s.* 6*d.*

We have pleasure in reporting that the sale of greeting cards supplied by Ash & Co., Ltd., has reached the gratifying amount of £110 17*s.* 3*d.*, to be handed to the Hospital funds without deduction, and would heartily thank those who have contributed to this result by purchasing the cards.

The Radial Pulse

A Clinical Lecture by Dr. J. A. Ryle

Gentlemen,—From the earliest times the examination of the pulse at the wrist has been a familiar and important medical ritual. It has lost nothing of its importance and remains the most frequent of the scientific observations of daily practice. I say "scientific" for, in counting the pulse, we are making an accurate numerical record which may be compared with known standards, and the personal equation plays no such part as it does in the assessment of many signs and symptoms. In determining the qualities of the pulse we may make other valuable observations, but our estimates, not being measureable by the unaided finger, lack precision.

In this slender volume by William Heberden, with its comprehensive title—"Commentaries on the History and Cure of Diseases"—is included a small paper which I often peruse with pleasure. Its subject is "Remarks on the Pulse," and it was read at the College of Physicians on July 7th, 1768. It has not attracted the attention rightly given to his account of Angina Pectoris, the first and best account ever written of that disorder, but like so many of Heberden's writings it is remarkable for the accuracy of its clinical descriptions, for the soundness of its conclusions, and for the pleasing simplicity of its style. It interests me to think how gratified Heberden would be, if he were to return to-day, to find so many of his opinions unaltered by the passage of time. How eagerly, too, he would accept and welcome the newer and more certain knowledge which has been won through the agency of instrumental device.

It is well for us to take stock occasionally of what has been added to our store by the introduction of methods and instruments of precision. Physicians, even if they handle none of these but the sphygmomanometer, must remain in constant debt to Sir James Mackenzie, Sir Thomas Lewis and others, for the light which their researches have thrown upon many familiar and other less familiar pulse phenomena. It would, I believe, be perfectly fair to claim that we can now, as a rule, get on very well in practice without the sphygmograph, the polygraph or the electrocardiograph, but our ability to do so is in great part due to what we have learned from them, and in certain situations we shall continue to require their aid if we are to give of our best in diagnosis, prognosis and treatment.

My present plan, however, is not to enquire into this indebtedness or to discuss the physiology of the radial pulse, but rather to consider what diagnostic information can be obtained by us, employing only, after the manner of Heberden, the unaided finger and the radial arteries of our patients. By "diagnostic information" I mean such as will, without further ado, allow a positive diagnosis or strongly support or suggest a diagnosis. I need hardly add that we should never rest content with this evidence alone, and that my purpose is rather to indicate how helpful so simple a procedure as feeling the pulse may sometimes be than to encourage undue reliance upon it.

There are five particular observations which may be made on the pulse, some of which we make

consciously or half-consciously every time we put a finger to a wrist, but all of which in certain types of case we should be at pains to make and to record. I refer to (1) the rate, (2) the rhythm, (3) the volume, (4) the tension of the pulse, and (5) the state of the artery.

For convenience, however, I shall here consider abnormalities of pulse behaviour under three headings, namely, *altered rate, altered rhythm,* and *altered quality*—allowing quality to speak for volume, tension and the state of the vessel. You will appreciate that rate, rhythm and quality may be severally or simultaneously modified. You will also observe that pulses may be diagnostic of general as well as of cardio-vascular diseases.

ALTERED RATE

Heberden, wisely partial to matters of fact, devotes a large part of his paper to pulse rate or frequency. We all know that the rate of the pulse in health varies with age, sex and circumstance, and that anxiety, fever, and hyperthyroidism can greatly accelerate it, but in none of these conditions can we, by examining the pulse alone, conjure at once a diagnostic image. There are, however, extremes of rate which greatly assist us to a diagnosis. In *simple paroxysmal tachycardia* we find, in an otherwise healthy and afebrile subject, the pulse beating at 120–200 to the minute, and without arrhythmia, for periods of seconds, minutes, hours or, much more rarely, days. Such rates are not commonly accomplished under conditions of anxiety, the higher rates not even in hyperthyroidism, and occurring in the course of a fever or serious illness they would at once give cause to fear approaching death. The pulse like the heart-sounds in such cases is somehow reminiscent of the restless ticking of a watch, and, examining a case for the first time, you should notice at once that rate and quality are alike unfamiliar. With rates above 160 to the minute, even if the pulse be regular, accurate counting becomes extremely difficult. It is characteristic of these paroxysms that they start and terminate abruptly, and in brief paroxysms you may have the good fortune to be witness to this further diagnostic sign. The condition is often innocent, although very uncomfortable, and commonly occurs in the absence of any structural heart-disease.

A young man consulted me a few years ago for paroxysms of this kind in which his pulse-rate reached 180 or 190 to the minute. They always started and ended abruptly, but never lasted more than a few minutes. He was also a stammerer and had spasmodic asthma, so that he afforded a good example of stammering with other organs than those of speech. He played football with impunity.

There are, however, more serious forms of exaggerated tachycardia. Thus, in *auricular flutter* pulse-rates varying from 130–160, without arrhythmia, may be found, the ventricle then usually beating at half the rate of the auricle. These rates may be maintained for months. The quick rate with associated pulmonary congestive signs sometimes leads to a diagnosis of pneumonia or other urgent lung disease. I remember such a case in the ward a year or two ago with basal congestion and slight hæmoptysis in which my house-physician feared pneumonic tubercle, but the history and the pulse peculiarity, with a rate of 150, in a patient seeming singularly little perturbed, suggested some form of paroxysmal tachycardia, and this was proved by an electrocardiogram to be due to "flutter." Very high rates and sometimes paroxysmal behaviour also occur with *auricular fibrillation.* With the high rates it is often difficult to appreciate the presence of arrhythmia. A woman, aged 54, had a pulse-rate in my consulting-room of 160 to the minute and over, and (as I noted it at the time) the pulse was, so far as the finger could determine, "practically regular." But her bouts, as she described them, did not end abruptly, the tachycardia had now become persistent, and her appearance suggested organic heart-disease. An electrocardiogram showed auricular fibrillation, and she responded very well to digitalis. When, therefore, the clinical features do not accord with a simple paroxysmal tachycardia we must have the assistance of an electrocardiogram, for without it appropriate and valuable treatment cannot be happily instituted and controlled.

Bradycardia, with pulse-rates in the neighbourhood of or just below 50, occurs in some big, robust men in health; after certain fevers; with jaundice, starvation and cerebral compression; and sometimes in myxœdema; but in none of these is the pulse-rate alone diagnostic. A pulse-rate of 30 or less, however, nearly always means complete heart-block, and so enables us to diagnose, with a finger on the wrist, a lesion of the auriculo-ventricular bundle. It may so serve to explain, without further enquiry, fainting attacks or fits which had otherwise remained obscure. To feel the uncomfortable pause between beats in these cases is a strange experience and not easily forgotten.

ALTERED RHYTHM

Other alterations of rhythm may be correctly assessed with a finger on the wrist, but I shall only dwell upon one significant and one less significant type of arrhythmia, both of them common in practice.

Auricular fibrillation, and we are here speaking of established rather than paroxysmal fibrillation, whether it occur as a sequel of rheumatic myocarditis and mitral disease, during the course of

Graves' disease, or in later life with arterial disease, is generally evidence of muscle damage. It produces a characteristic pulse in which may be noted an inconsequent irregularity affecting both the size and the spacing of the beats. The volume of the pulse shows continual variation ; beats may come in quick succession, or for a space may fail altogether to reach the wrist. It is a " higgledy-piggledy " pulse, and is often described as an " irregular irregularity," to distinguish it from sequential irregularities like the physiological *sinus arrhythmia* of childhood in which the pulse-rate increases during inspiration and slows in expiration, or the gravely pathological *pulsus alternans* in which large and small beats alternate regularly. Fibrillation cannot always be recognised unhesitatingly by the finger alone, for frequent multiple extra-systoles may simulate it, or a very rapid rate, as in the case of fibrillation just described, may obscure the arrhythmia. But in a large proportion of all cases the finger alone suggests strongly what may be in other ways confirmed.

Extra-systoles are probably the commonest of all the causes of irregular pulse. I daresay some of you have yourselves experienced them. Although possibly more frequent in minor debility and dyspepsia, in pulmonary tuberculosis and in old age, they are also consistent with perfect or nearly perfect health and in young persons especially, except that they may create fears, are generally of small moment. The extra-systole—or premature contraction—which follows a normal contraction and is in turn followed by a compensatory pause, may actually be appreciated in this way at the wrist. Sometimes, however, it is too weak to reach the wrist, and then there appears to be an unduly long pause.

Heberden clearly recognised the condition when he wrote as follows: " Some books speak of intermitting pulses as dangerous signs ; but, I think, without reason ; for such trivial causes will occasion them, that they are not worth regarding in any illness, unless joined with other signs of more moment. They are not uncommon in health, and are often perceived by a peculiar feel at the heart by the persons themselves every time the pulse intermits." Actually I suspect that it is the compensatory pause which gives the " peculiar feel at the heart." He even pursued to necropsy the case of a woman dying of cancer who had had an intermitting pulse from her youth, and " an able anatomist " could demonstrate no disease of the heart, pericardium or great vessels.

In diagnosing extra-systoles, therefore, you are often in the happy position of being able to diagnose something that does not much matter and so can the better reassure your patient.

ALTERED QUALITY

There is a remarkable type of pulse associated with the name of Corrigan, a Dublin physician, and alternatively described as the water-hammer pulse, which is characteristic of incompetence of the aortic valve. It is best felt, not with the finger-tips, but with the palmar aspects of the fingers laid across and embracing the flexor aspect of the patient's wrist and with his arm raised above the level of his chest. It can frequently be recognised without this manœuvre, but with it the peculiar shock-like sensation accompanying the sharp thrust and quick recoil of the artery are better appreciated, and the ulnar pulse—not as a rule easily found—is simultaneously felt. I find that most of my clerks have no idea as to why it is called a " water-hammer " pulse. A water-hammer is a physical toy and consists of a glass tube half filled with water from which the air has been largely exhausted. When it is tilted the water falls with a peculiar slap to the other end of the tube, so that the name is quite appropriate. Pulses of water-hammer type are also felt in severe anæmias, especially in the recovery phase after recent hæmorrhage, and frequently also in elderly folk with rigid thoracic aortas. But in its most developed form the water-hammer pulse proclaims an aortic leak. Aortic incompetence is a result of rheumatic or infective endocarditis or syphilitic aortitis.

Aortic stenosis has also a peculiar and characteristic pulse, although it is not, as a rule, so readily appreciated as Corrigan's pulse. Unlike the latter which we may visualise, in a sphygmographic way, as a sudden ascent, a sharp peak and a swift decline, the stenotic pulse conveys the impression of a plateau-like curve. In other words, it takes time to pass the palpating finger. For this reason it is still better felt with two approximate fingers simultaneously. I know of no other condition which will produce this kind of pulse.

The pulse of high blood-pressure.—There is no more characteristic pulse in medicine than the high tension pulse, the " pulsus magnus, durus, et tardus " of the older physicians. Unless cardiac defeat has supervened upon long hyperpiesis the pulse is slow and generally of full volume, but what is especially remarkable is the degree of finger-pressure necessary to obliterate the pulse-wave so that it cannot be felt by another finger at a lower level. The artery itself in later stages of the disease, imparts a sensation of toughness or hardness to the finger, can be felt and rolled even when the pulse is obliterated, and is commonly tortuous. Accurate estimation of the blood-pressure without the sphygmomanometer is, I believe, impossible even with long practice, but we should generally be able to estimate that a

pressure is above 180 or below 100 mm. of mercury. Between these figures it is difficult to arrive confidently within thirty or forty millimetres of the correct reading.

In striking contrast is the extremely *low tension pulse of Addison's disease* which, when you have had experience of a case or two, may be the first thing to draw your attention to the true diagnosis. The symptoms in the early stages of the disease so often amount to little more than a complaint of weakness, pigmentation is not always obvious, and in a blonde Saxon type I have known it entirely lacking. There is something arresting and uncanny in the feel of a pulse so weak and compressible in a patient, perhaps but recently prevented from going about his affairs. In later stages to palpate is almost to obliterate the pulse. Apart from states of syncope and collapse and certain cases of coronary occlusion, an accident which is usually associated with a profound fall in blood-pressure, it is quite uncommon to feel pulses of the peculiar poor quality which we associate with disorganization of the suprarenal glands, and which Addison himself described as " small and feeble " or " excessively soft and compressible."

There is an alteration in the pulse described as *dicrotism* in which the dicrotic wave is greatly exaggerated and each beat appears to be duplicated or accompanied by a poor reflection of itself. The sensation imparted to the finger is unique, generally unmistakeable and quite distinct from that furnished by a *bigeminal pulse* in which every normal beat is followed by a premature contraction and then by a compensatory pause. It can, however, be mistaken for doubling of the pulse-rate and may be so charted by the nurse. The dicrotic pulse occurs especially in grave febrile illnesses, but is so frequent in typhoid fever and comparatively so infrequent in other diseases that it has long been regarded as a " diagnostic pulse."

In a case to which I was called last year in which severe headache and high pyrexia had led to a fruitless exploration of the accessory sinuses a dicrotic pulse was noted and was the first thing to suggest the actual diagnosis. I was a little shaken and incredulous when the pathologist, two days later, reported that he had grown *B. coli* from the blood, but we had not long to wait before rose-spots appeared and simultaneously the pathologist revised his verdict and announced *B. paratyphosus B* in all cultures. I have recently had an example of extreme dicrotism in Addison Ward in the case of a boy with miliary tuberculosis with pericarditis. Postmortem we found miliary tubercles throughout the myocardium.

Complete pulselessness, excepting for very short periods or when the artery is obliterated, might be thought to be inconsistent with life. Thus we associate the condition chiefly with syncopal attacks, with shock, hæmorrhage or the moribund state. I have, however, the notes of two cases in the first of which no pulse could be felt at the wrist for some 12 hours, while in the second the radial, carotid and subclavian pulses were all impalpable for 12 hours and the radial was only doubtfully palpable after 24 hours. Both were cases of anaphylactic shock following administration of serum and both made a complete recovery.

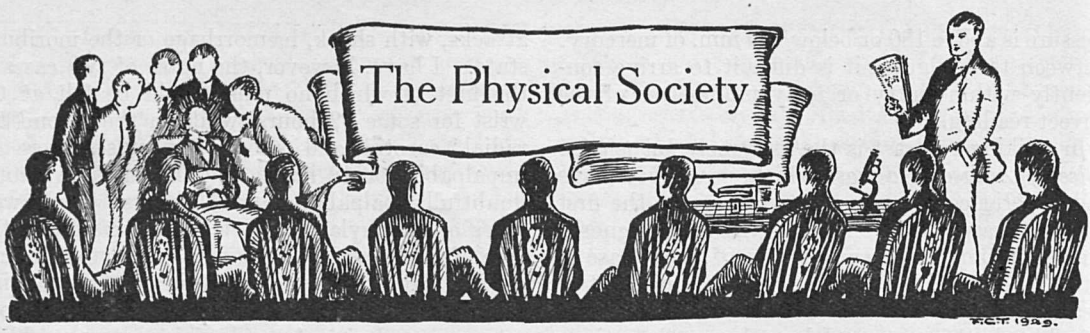
John Hunter records that in his first anginal seizure, which was almost certainly due to a coronary occlusion, four physicians were unable to feel his pulse for the space of three-quarters of an hour. He survived the attack for 20 years. I know of no other conditions in which prolonged pulselessness may occur and yet recovery follow.

A rare pulse anomaly is the *pulsus paradoxus*, in which the pulse weakens or disappears in inspiration. It is a sign of pericarditis with effusion.

The types of pulse which I have endeavoured to describe are all definite in their way and instructive for that reason. Their value is chiefly diagnostic. But there are other less definite pulse-variations, instructive rather in a prognostic way, which it would be beyond my power to describe. How is it that we visit a case sometimes and, notwithstanding that the patient—perhaps a victim of pneumonia or some surgical disease—appears to be doing fairly well, we say " But, I don't quite like the quality of his pulse," and are justified in our anxiety by subsequent events ? And how is it contrarily that we may see a patient seemingly in dire straits and, largely on the quality of his pulse, give a more hopeful verdict ? It is not mere guess-work nor yet any special skill, but rather the interpreted result of past experience and a subconscious reading of rate, rhythm, volume and tension and their relations to one another and to other signs. Such mental procedures cannot be taught, but it is open to us to acquire them by self-schooling in the art of observation.

Heberden, criticising certain doctrines prevalent in his time, says :—" I have more than once observed old and eminent practitioners make such different judgments of hard, and full, and weak, and small pulses, that I was sure they did not call the same sensations by the same names. It is to be wished, therefore, that physicians, in their doctrines of pulses, and descriptions of cases, had attended more to such circumstances of the pulse, in which they could neither mistake nor be misunderstood."

He was here referring more particularly to the rate, but if you are clear also in your use and understanding of the terms and systematic in your assessment, when occasion demands, of rhythm, volume, tension and the condition of the arterial wall, you will be subscribing still further to this wise behest.



AT the Meeting held on January 9th, Mr. BRUCE PEARSON was in the Chair. The cases were, for the most part, accompanied by sheaves of complicated notes, most of which had to be very carefully perused in order to discover even the organ under discussion. This meant that one *either* read the report *or* examined the patient. It was gratifying to hear the Secretary make a plea for shorter and clearer explanatory notes, and we hope that in future an effort may be made to conform to this plan.

Mr. ELVIN reported the case of a man who had been opened for pyloric stenosis, had been diagnosed as inoperable carcinoma, and was now alive some years later still suffering from acute attacks of pain and vomiting.

Mr. BRUCE PEARSON attempted to lead the meeting along the right path of discussion with a few introductory remarks.

Mr. ECKHOFF had seen an X-ray of a large lesser curve ulcer, but admitted that it might have belonged to another patient.

Mr. READING reiterated the physician's time-honoured slogan and asked for a differential count. He added that the case might be one of tuberculosis of the stomach.

Mr. COLBECK delivered an oration from which it transpired that a blood count did not matter.

Mr. READING—according to Mr. R. E. SMITH—misquoted Cabot. He and Mr. COLBECK then became heated on the subject of Cabot's claim to fame as a hæmatologist.

Mr. R. E. SMITH then diagnosed the case, and Mr. BRUCE PEARSON, with his eye on Messrs. COLBECK and READING, sounded the gong, and sent each to his own corner.

Mr. BRADBEER showed the case of a young man with diabetes insipidus, and asked for its ætiology.

Since no one seemed inclined to discuss the ætiology, Mr. TODD felt brave enough to say that it was hysterical. This pronouncement was received apathetically except by Mr. COLBECK, whose physiological soul was so shocked that he was impelled to tell us all about pituitrin, diabetes insipidus and a lot of other things.

To this Mr. TODD replied that if it wasn't hysterical, then it was connected with the tuber cinereum—so there !

Mr. HOWELL then told us about a young man with a fluctuating lump on the side of his nose and headaches. He asked for the diagnosis. After silence had reigned for some minutes, Mr. HOWELL rose again to suggest that the case was one of lymphangioma. He asked for the treatment. Stimulated by this display of comparative intelligence the discussion began to open. For instance, Mr. READING revealed the fact that he knew at what age the frontal sinuses appear.

Mr. COLBECK became almost pornographic, and related the story of a man with a sacral meningocele who always developed a headache from increased intracranial pressure whenever anyone did an R.E. on him. This story reduced the meeting to silence once more.

Mr. COLBECK then arose and involved himself and everyone else in the complicated story of a wretched young man from Clinical, in which a state of alternate excitement and stupor appeared to be associated with a pleural effusion.

Mr. ECKHOFF attempted to make a medical diagnosis, but was confused by blood counts.

Mr. BRUCE PEARSON mentioned that someone had diagnosed tuberculoma of the brain.

Mr. BLOOM made every impossible diagnosis from encephalitis lethargica to tuberculous otitis media, and then confessed that he had still not accounted for the whole story.

Mr. R. E. SMITH was sure that the Clinicals had not spotted the pleural effusion for some weeks after it had first appeared, but seemed sure of little else.

Mr. BRUCE PEARSON summed up the case excellently by suggesting that the patient was just stupid.

Mr. BRADBEER told us the history of a blind man.

Mr. J. B. SCHOLEFIELD, by a process of exclusion localised the lesion to the eye or the optic nerve.

Mr. COLBECK knew far too much about methyl alcohol for one so young. He diagnosed tobacco amblyopia.

Mr. READING disagreed with Mr. SCHOLEFIELD on the physiology of the motor cortex of the brain, and with Mr. COLBECK on principle.

Mr. R. E. SMITH explained the difference between primary and secondary optic atrophy. He supposed no one had done a diagnostic lumbar puncture on the patient.

Mr. BLOOM then ventured further suggestions.

Mr. D. MCGREGOR related the case of a man with a large spleen and black stools. The case had been diagnosed as a carcinoma of the stomach by the physician, and a carcinoma of the splenic flexure by the H.P.

Mr. ROBERTSON thought the lump was a hypernephroma.

Mr. BLOOM thought it was a carcinoma of the tail of the pancreas.

Messrs. READING and TODD dealt with this diagnosis fairly efficiently.

Mr. R. E. SMITH said that since the case was an obvious splenic anæmia with cirrhosis of the liver, the patient should be subjected as soon as possible to splenectomy. He thought fit to embarrass the Ward Clerk on the subject of blood counts—a childish topic which by its continual prominence reflected the atmosphere of the meeting.

Mr. TODD introduced the subject of the thrombocytic diathesis. This was taken up by Mr. SMITH who became involved and had to be disentangled by Mr. TODD. Mr. SMITH then involved himself again in some quaint ideas about the anatomy of the splenic vein and the inferior vena cava and was this time corrected by Mr. READING.

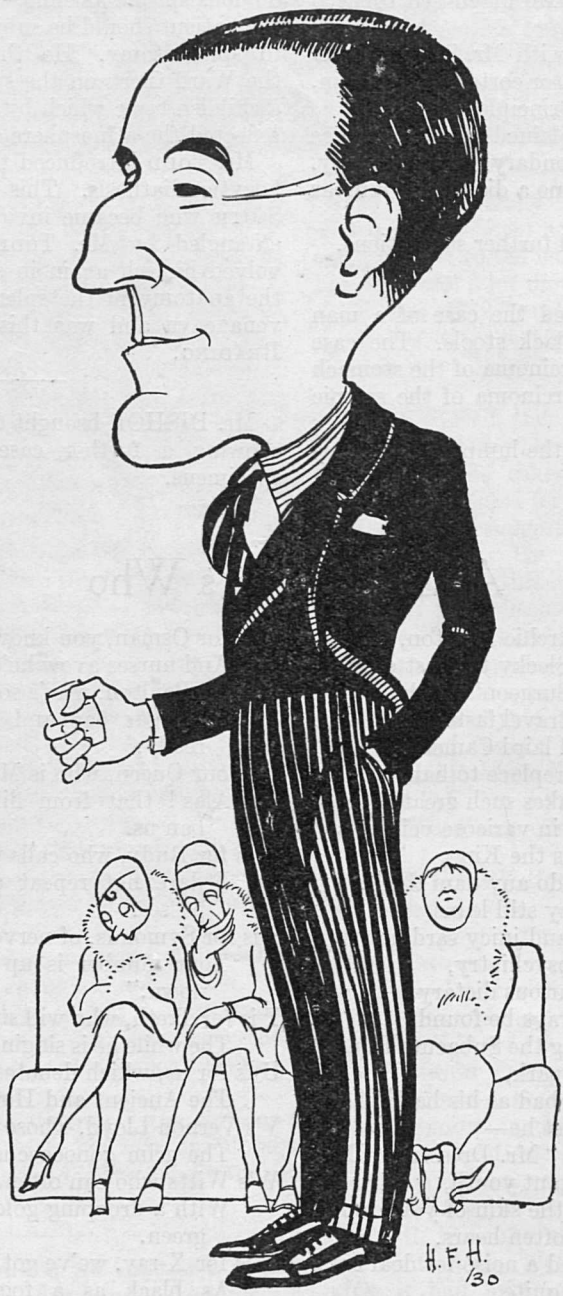
Mr. BISHOP brought the meeting to a close by showing a further case and two pathological specimens.

A Guy's Who's Who

A's for anæsthetist, that's Archie Marston,
A suitable subject for Slecky to blast on.
B is for Bobby, the House Surgeon's blight,
They say that his ops. travel faster than light.
C is for Hector, the Hieland laird Cameron,
Happy when given a fireplace to hammer on.
D is for Douthwaite, who takes such great pains
To stick horrid needles in varicose veins.
E is for Eason, of Guy's he's the King,
The Super will let him do any dam thing.
F is for Frankie, whose fancy still leans
Towards ripe bananas and juicy sardines.
G's for Gillespie, strong in psychiatry,
He hasn't got such a curious dietary.
H is for Hurst, who can always be found
On Tuesdays conducting the Subacute Round.
I is for Iredell, a very gay spark,
His bite isn't nearly as bad as his bark.
J stands for Joey, a humorist he—
Just hear him exclaim "Mr. Dresser, M.D."
K's Kelsey Fry, a most elegant youth,
He'll lay on to you by the skin of your tooth.
L is for Layton, whom one often hears,
A sight for sore eyes and a noise for deaf ears.
M is for Molly, his opposite quite,
Your tonsils he'll snatch like a thief in the night.
N is Old Nick, who has such a collection
Of section on section on section on section.
O is for Osman, you know he's a Pasha
And nurses avow he's a bit of a masher.
P is for Poulton, who's sometimes called Eddie,
With gas bag and stomach tube he's ever ready.
Q is our Queen, who is Matron MacManus,
Alas! that from flirting with Nursie she'd ban us.
R is for Rudy, who calls us all asses,
I dare not repeat all the "strictures" he passes.
S is for Symonds, of nervous renown,
Your number is up when he says "Lie ye down."
T is for Treth, who will straighten your limbs,
The while he is singing the quaintest of hymns.
U is for us, which denotes, I surmise,
The Ancient and Honourable Order of Guy's.
V's Vernon Lloyd, whose design is to cheat
The grim gonococcus and slim spirochete.
W's Witts who can often be seen,
With a drooping gold lock and a tie of bright green.
X is for X-ray, we've got quite a stock,
As black as a fog, "signed p.p. Lindsay Locke."
Y is the youth, who supports Guy's tradition, and
Z is his zest for the rôle of physician.

S.A.

BOROUGH TYPES—I.



F.C., late of 14, St. Thomas's Street

The Uses and Abuses of Vulcanite Substitutes

A Paper read before the Dental Society, December, 1929, by F. A. Walker, Esq., L.D.S.

MR. PRESIDENT AND GENTLEMEN,—Since 1855, when Charles Goodyear (Junior) obtained a patent for his method of constructing base plates for artificial dentures by heating together a mixture of rubber, sulphur, and colouring matter, vulcanite has, we might almost say, been the standard material employed in their construction.

The chemistry of the vulcanisation of dental rubbers can be briefly explained in the following manner. A mixture of two parts by weight of pure Para rubber (C_{10} H_{16}) is masticated with one part by weight of sulphur, and packers sufficient to colour the finished article added. This mixture, which forms the unvulcanised dental rubber, or soft rubber, is cured by heating to a temperature around 170° C. for about one hour. The changes occurring during this process are known as vulcanisation, and the nature of these changes has been the cause of much discussion in the past. L. E. Weber gives the following statements on vulcanisation :—

(1) The rubber hydrocarbon (C_{10} H_{16}) combines with sulphur without the evolution of H_2S. The vulcanisation of rubber is therefore an addition process.

(2) The insoluble constituent of rubber combines with sulphur under vulcanising conditions, at a very slow rate, with the evolution of H_2S, and with the formation of a substitution product.

(3) The process of vulcanisation consists of the formation of one of a continuous series of addition products of rubber and sulphur. Physically this series is characterised by a decrease in distensability, and an increase in rigidity. Which of the series is produced depends upon temperature, time, and proportion of sulphur present.

I think it is desirable before proceeding further, that we should enumerate the properties that an ideal denture base material should possess :—

(*a*) The technique should be such that the average practitioner can produce satisfactory dentures, and effect easy repairs.

(*b*) It should be capable of perfect adaptation to the mouth.

(*c*) It should be sufficiently strong and rigid to retain its shape under the stresses of mastication, and if possible survive accidental droppages.

(*d*) It should be a good conductor of heat.

(*e*) It should be chemically inert.

(*f*) Its surface should not be porous.

(*g*) It should be capable of being cleaned easily.

(*h*) It should resemble the natural gum.

(*i*) Its cost should not be unduly high.

With these desirabilities before us, it can be readily comprehended that the chief cause of dissatisfaction with vulcanite lies in its colour. Further, its internal contraction, poor conductivity, and surface porosity are bad features. Even with these serious faults, I should, however, like to state that, with suitable precautions and foresight, vulcanite has been, and still is, a very valuable dental servant.

The chief object of this paper is to show that to obtain the maximum degree of success in the prosthetic art, it is necessary to choose the most suitable material for each case. Also I hope to make it clear that nearly every vulcanite substitute has its uses, and the most successful practitioner will be he who, knowing his materials and their limitations, makes a wise choice for each individual denture. I can, however, only endeavour to indicate the general uses to which the different materials best lend themselves.

There are two groups of vulcanite substitutes :—the metals, and what for want of a better name we will call the " appearance " group.

We will deal with the metals first, and as you are all familiar with them we will not spend long on them.

GOLD.

Gold has a very definite place in prosthetic dentistry, chiefly on the grounds of its strength, conductivity, hygienic properties, and reasonably simple technique. The factors limiting its use are poor retention, due to its density, its colour, cost, and unless a swaged base is employed, surface porosity. Bearing all these facts in mind, it will be seen that it is an extremely useful material for the construction of partial dentures, where colour is not a governing factor. The denture can be kept free of many natural teeth, without sacrificing strength or rigidity. It can be thin and small, while with suitable clasps and supports good retention is assured. Another use is in the construction of a full lower denture, where it may be an advantage to have extra weight and a fitting surface of gold.

As doubtless you are all aware, the commonest misuse of gold is for full upper denture construction, where, unless retention is very good, or the patient very skilful, failure is certain.

STAINLESS STEEL.

The use of stainless steel as a denture base material is of recent development, and while its density and cost is less than gold, and its strength greater, its use in prosthetic dentistry is limited

by the lack of a suitable solder. There are two methods of joining stainless steel. First, by using silver solder with a flux of equal parts of blue borax, pot. fluoride and boric acid, afterwards gilding the joint; and secondly, by welding. Thus the use of stainless steel instead of gold is indicated where low cost and great strength are the determining factors.

ALUMINIUM.

By the study of the general properties of aluminium, we might be led to suppose that it would fill a very large place in metal denture construction. It is light, maleable, tenacious, a good conductor and resistant to H_2S. In actual fact, however, its use is very limited, chiefly on account of the want of a suitable solder, and also on account of its electrolytic action. It has nevertheless a definite use, for in some cases, it is desirable to construct a full upper denture, with a metal fitting surface, and it is here that aluminium proves its worth. A combination denture of vulcanite and aluminium made according to Mr. Kelsey Fry's technique has proved to my personal knowledge a very satisfactory restoration.

THE APPEARANCE GROUP.

The members of this class, about which I wish to talk to-night, are three in number:—Fused porcelain, with or without a metallic base, the synthetic resins, and cellulose plastics.

We will first of all say a few words about fused porcelain work, and then pass on to the more enthusiastically received synthetic resins and cellulose plastics, about which there has been much recent discussion as to their relative merits. As the known dental history is short, it is difficult to give a definite judgment on their uses.

FUSED PORCELAIN.

Continuous gum work is rarely undertaken nowadays, and I mention it merely as a matter of passing interest. Some beautiful pieces of work, from an artistic point of view, have been produced, but great weight, difficult technique and high cost far outweigh any advantages gained by their appearance. Further technique can be employed in working fused porcelain. The anterior teeth are fused together with a facing of porcelain gum, the whole being built up on a matrix of alundin. The resultant facing is then incorporated in a vulcanite denture. By this method it is possible to dispense with the weighty platinum base used in the older type of continuous gum work. The technique, however, is extremely difficult, and in the majority of cases there is not room for the porcelain facing and its supporting vulcanite.

SYNTHETIC RESINS.

In 1924 the Dental Board instigated research with a view to finding a more suitable material for the construction of dentures. The outcome of their research was a light coloured, semi-translucent synthetic resin, formed by the interaction of phenol and formaldehyde in the presence of a suitable alkali. This resin was then coloured to resemble the natural gum. *Walkerite*, as this new material is called, is packed into a perfectly dry flask, and baked for a considerable period at varying temperatures in an electrically heated oven, thermostatically controlled. The finished denture has a good colour, is light in weight, its fit being far superior to that of vulcanite. The material is ideal for the construction of full upper dentures, inasmuch as the gum work can be exposed without fear of unsightliness, thus permitting the teeth to be placed in more natural positions. The superiority of the fit would appear to be due to a peripheral contraction, as it is impossible to fit a Walkerite base on to its steel model after it has been baked on a duplicate plaster mould. Again, if a base is baked on an R II* model, it very often splits, because the R II model will not give sufficiently to allow of the peripheral contraction.

Two disadvantages that have been urged against Walkerite are loss of colour, and a tendency to brittleness. It would appear, however, that both these faults are due to the failure to expel all moisture during packing and baking. It has certainly been found at this hospital that there is a very wide scope for Walkerite in the construction of full upper dentures, and also in facial restorations where a large amount of material has to be employed. It must be clearly understood, however, that to obtain successful results, time, together with extremely careful and accurate working, are necessary. Further, in view of its somewhat fragile texture, and the greater difficulty of repair, it is wasted labour to supply a careless patient with a Walkerite denture.

Before passing to our next type of material, I should like to mention here a new method which may possibly revolutionise Walkerite technique. A vulcaniser is the only apparatus required, and although I have previously impressed upon you the care which must be taken to eliminate moisture, yet such elimination is disregarded in this method. The details of technique are as follow:—

Having set up the denture in the usual manner, extremely thin tinfoil is swaged on to the model,

* "The Use of Plaster of Paris and Allied Substances for Dental Models" by R. N. Johnson, M.Sc., A.I.C., and Professor C. S. Gibson, O.B.E., M.A., M.Sc., F.I.C., *Brit. Dent. Journal*, June 15th, 1929, p. 681.

a surplus being left all round the periphery. The case is seated on to the coated model, and all exposed surfaces covered with tinfoil. Flasking, opening, and boiling-out are performed in the manner normal to the upside down position, with the addition of cleaning by methylated spirit. It is absolutely essential at this stage, that every tooth be removed, in order that any plaster which has leaked through the joints in the tinfoil may be taken away. The flask is warmed in boiling water, and again washed with methylated spirit, the surplus spirit being allowed to evaporate. Walkerite that has been softened on a hot plate, is packed to excess in the flask at 70°C. The flask is closed slowly in a press, and clamped, boiled for five minutes, and then finally pressed and reclamped.

BAKING.

Baking is carried out in a clean vulcaniser containing 4 ozs. of methyl alcohol, or industrial spirit. The vulcaniser is secured, and when the pressure is 5 lbs. per sq. in., the valve released to remove air. The valve is then closed and heating continued till the gauge registers 95 lbs. per sq. in. When this pressure has been maintained for 55 minutes, the gas is turned off, and the pressure allowed to fall to 15 lbs. per sq. in. The remaining pressure should then be released and the vulcaniser opened. The flask may now be removed and allowed to cool slowly. If care has been taken in the tinfoil swaging, little finishing other than polishing will be required.

CELLULOSE PLASTICS.

Recently much has been heard of the cellulose plastic type of material for the construction of dentures. These plastics have tempted the dental profession from time to time, since they are immensely strong, good in colour, and simple in technique. As long ago as 1900 they were in use, but with much regret the dental profession ceased employing them on account of their unsatisfactory behaviour. Although it is claimed for the newer types of this material that they have no connection with, nor any of the disadvantages of their predecessors, experiment would appear to show otherwise. I would draw your attention to the findings of the Research Committee of the Metropolitan Branch of the B.D.A., who investigated a material, presumed to be an acetate of cellulose. Slabs of this material provided by the makers were found to be affected firstly by a mixture of 20 per cent. saliva and 80 per cent. distilled water, secondly by a 1 per cent. solution of lysol, and thirdly, by a 1 per cent. chlorine containing antiseptic solution in water. Using a similar material I have found it extremely difficult to avoid white patches on the finished dentures, and there is also an objectionable smell of camphor, which can only be removed temporarily by treating with NH_4OH. Under mouth conditions the material readily absorbs moisture, and, therefore, presumably bacteria. Thus it would appear that unless our technique is at fault, these newer materials are as unsuitable for denture construction as were the older celluloid products.

Before concluding, I should like to offer my thanks to Mr. Johnson for his general help and advice. In conclusion, I would express the hope that I have helped you to realise that no known material is suitable for all purposes, and that you will be wise if you select your material to meet the demands of each individual case and patient.

Correspondence

A Review on "Mothercraft"

To the Editor of the GAZETTE

SIR,—Your reviewer, in his remarks in your issue of the 14th December, on Dr. Housden's book "Mothercraft," is somewhat severe on the author because he "seems never to have heard of the recent order requiring all dairies to be inspected . . . . ."

Having been for ten years M.O.H. of a district with a large number of dairy farms, I can claim some practical knowledge of this subject, and I can assure him that although the Milk and Dairies Order, 1926, to which I assume he refers, has, together with certain other factors, effected some improvement which is, I think, progressive, yet the conditions Dr. Housden describes are unfortunately not yet quite "out of the question," and your reviewer betrays a blissful ignorance of the milk problem in this respect.

I would emphasise that the only guaranteed milk to-day is that which is "graded," and produced and retailed under licence.

Yours, etc.,

MARK AVENT.

Rotherwick,
Hants.

Guy's Dental Dinner

To the Editor of the GAZETTE

SIR,—The 31st Annual Dinner of Guy's Hospital Dental Society will be held on Saturday, March 1st, at the Wharncliffe Rooms, Hotel Great Central, at 7 for 7.30 p.m.

The price of each ticket is 12s. (exlusive of wine), and a special price of 9s. 6d. has been fixed for students.

Mr. F. N. Doubleday, the President of the Society, will take the Chair.

An attractive entertainment is being arranged, and it is hoped that all members of the Society, both past and present, will be able to come and enjoy the pleasant evening which is in store for them.

Yours, etc.,
SELWYN HOLMS,
Guy's Hospital, S.E. *Hon. Secretary.*

Death of S. R. Alexander

To the Editor of the GAZETTE

SIR,—*The Times* announces the death of Sidney R. Alexander, a Guy's man who entered the Hospital about 1882. He was knighted for civilian services during the war, and further was seven times elected Mayor of Faversham.

He was the first man to bring to England from Paris the injection treatment of varicose veins.

Yours, etc.,
ALFRED D. FRIPP.

A "Combined Round"

To the Editor of the GAZETTE

SIR,—One day, while looking through the interesting pages of the "Postgraduate Medical Journal," it occurred to one of us that an occasional "postgraduate" gathering of old Guy's men at the Hospital itself, in the form of a conversazione or the like, would be an extremely popular event. To be able to go round the Hospital once again and at the same time to have opportunities of discussing with the members of the Staff the latest methods of diagnosis and treatment would be to all of the greatest interest and value.

If a sufficient number of men signified their intention of attending, it might be desirable to hold one meeting for medicine and another for surgery.

In putting this idea forward, we quite realise that possibly there may be objections, but we do feel that an occasional meeting on lines such as these would be greatly valued by many old Guy's men.

Yours, etc.,
THREE GUY'S MEN OF THE "NINETIES."

(We would mention in this connection that a "combined round for post-graduate students" is held in Mary at 2 p.m. on Tuesdays by Doctors Hurst, Marshall, Symonds, Gillespie and Witts, and also that on Thursday afternoons, at 2 p.m., Doctors Poulton, Campbell, Dowling and Ironside, hold a similar round.—ED.)

Review

Physio-Therapy in General Practice. By BELLIS CLAYTON, M.B., B.Ch. (Cantab.), Director of the Physio-Therapeutic Department, and in charge of the Massage and Electrical School, King's College Hospital, London. Published by Messrs. Baillière, Tindall & Cox. Illustrated. *Price* 12*s.* 6*d.*

WE welcome the appearance of a second edition of the book. In the Chapters I and II, the general value of Massage, Exercises, Electricity, Light and Heat is briefly tabulated. In both these chapters a vast subject is covered in a very short space, giving the reader a clear outline of what may be expected from its application, although as a guide for students' study it is much too brief. The modern method of splinting and early restoration of function in the treatment errs on the old-fashioned methods, in that long-continued splinting and slow return to normal use are advocated, *e.g.*, in a fracture of the head of the radius the elbow is fixed for three weeks with no movements; this, in some cases, would lead to criticism. The treatment of deformities is covered in two chapters. Needless to say, this can only be very sketchy, but some quite useful ideas may be gained from the suggested exercises, and in the use of Klapp's crawling, illustrations of which are clear in Chapter 14. The space allotted to the treatment of diseases of hearts and lungs is very inadequate, and one wonders if it is wise to advise the masseuse to wait for the symptoms as described on page 124 to arise before discontinuing treatment. A large proportion of the work is devoted to diseases of the nervous system, and the exercise suggested for the treatment of hemiplegia will be found helpful. The book should be found useful for the medical practitioner as well as a guide to the masseuse to refresh their minds when ordering and treating patients. It is not sufficiently comprehensive as a text book for students. The print is clear and the illustrations good, and the work should find a place in the bookshelf.

Guy's Hospital Musical and Operatic Society

THE Annual General Meeting was held on January 7th, 1930, and the President, Dr. Fawcett, took the chair; there were 26 members present, including the Matron, Sister Johnson, Sister Matthews and Mr. Mollison.

Mr. Mollison read the balance-sheet, as appended. This showed that the Society has £6 3s. 7d. in hand, after paying off a deficit of £42 8s. 1d., which sum includes the purchase of a piano. Dr. Fawcett expressed the wish that the Society should join with him in expressing deep regret on the death of Sir Cosmo O. Bonsor, Bart., and said that Sir Cosmo Bonsor had always taken a keen interest in all Hospital activities.

The following officers were elected :—

President—Dr. J. Fawcett.

Vice-Presidents—The Matron, H. L. Eason, Esq., W. M. Mollison, Esq., W. H. Trethowan, Esq., E. C. Hughes, Esq., J. Lewin-Payne, Esq.

Hon. Treasurer—W. M. Mollison, Esq.

Hon. Secretaries—G. G. Ellis, Esq., E. M. Williams, Esq.

Hon. Librarian—A. Winston, Esq.

Students' Choral Representative—N. L. Barber, Esq.

Students' Orchestral Representative— C. Rutter.

Sisters' Orchestral Representative—Sister Johnson.

Sisters' and Nurses' Choral Representatives remain as last year, Sister Matthews and Nurse Lloyd, until the election of officers of the Nurses' League.

It was decided that a concert should be given in November, 1930, and a Gilbert and Sullivan Opera in 1931. Mr. Barber suggested that an attempt should be made to obtain members from the Massage Department, as this would relieve the strain on the Nursing Staff.

Dr. Fawcett then thanked the Society for electing him again, and the meeting closed with a vote of thanks to the Chairman. The two Secretaries, Messrs. Ellis and Williams, will be very pleased to give any information about the Society, and they would welcome suggestions for the concert, as rehearsals will start very soon.

STATEMENT OF ACCOUNTS, 1929

April, 1928—	£ s. d.	£ s. d.
By Balance in hand	36 15 1	
Jan., 1928—		
By Income as per Balance-Sheet, 1928	453 7 6	
		490 2 7
Jan., 1929—		
By Balance brought forward	14 11 11	
,, Debit Balance carried forward	42 8 1	
		57 0 0
Commencing H.M.S. Pinafore—		
By Sale of Tickets		322 11 10
,, Donations—		
Sir H. Cosmo Bonsor	10 0 0	
E. Palmer, Esq.	1 1 0	
Sister Johnson	0 10 6	
		11 11 6
,, Sale of Music		3 6 6
,, Refreshments—		
Nurses	7 0 0	
Men	19 17 0	
		26 17 0
,, Subscriptions—		
Nurses	1 2 0	
Men	1 12 6	
		2 14 6
,, Sale of Programmes		23 0 9
,, Bouquets and Flowers Account		2 4 0
,, Returned from Customs and Excise		8 0 10
		£400 6 11

G. G. ELLIS, G. A. R. WINSTON } *Hon. Secretaries.*

W. M. MOLLISON,
Hon. Treasurer.
January 8th, 1930.

Jan., 1929—	£ s. d.	£ s. d.
To Expenditure as per Balance Sheet, 1928	475 10 8	
,, Balance in hand, 1929, carried forward	14 11 11	
		490 2 7
May 10th, 1929—		
To purchase, Chappell & Co., Piano	36 0 0	
,, Deposit, Guildhall School of Music	21 0 0	
		57 0 0
Commencing H.M.S. Pianafore—		
To Debit Balance brought forward		42 8 1
,, Subscription, National Operatic Assn.		4 4 0
,, Chappell & Co., Purchase of Music		9 11 2
,, D'Oyly Carte—		
Band Parts	2 2 0	
Deposit	20 0 0	
		22 2 0
,, Customs and Excise		55 0 0
,, Refreshments		41 16 8
,, Cheque returned		1 2 6
,, Orchestra		64 10 0
,, Guildhall School of Music		30 18 6
,, Simmons & Co., Costumes		54 0 0
,, Ash & Co., Printing		19 16 0
,, Mr. Leffler (Producer's Fee)	20 0 0	
,, Mr. Templeman (Conductor's Fee)	20 0 0	
		40 0 0
,, Bouquets Account		3 2 6
,, Petty Cash (including Postages, typing and sundries)		5 11 11
,, Balance in hand		6 3 7
		£400 6 11

Sport

Rugby

Guy's v. Old Merchant Taylors

GUY'S opened their second half of the season with a home game on Saturday, January 4th against the O.M.T.'s, and were defeated by three placed goals (15 points) to two placed goals (10 points).

The Old Boys were represented by a very strong side, but Guy's had to take the field without three or four of the team which had been so successful prior to the Christmas vacation. The absence of Windsor Lewis, who was playing in the Welsh trial and Wailer at full-back, was very noticeable, as the backs did not play with that confidence and cohesion which was so pronounced against the Services and Aberavon.

The forwards during the first half were badly beaten for possession in the tight scrums, but in the second phase of the game, they played magnificently and repeatedly obtained the ball for their backs.

Heck, the Taylor's fly-half, and L. Bywater, their left-centre, were in great form for the visitors, and constantly menaced the Guy's defence by their extraordinary good passing and straight running.

During the first half, the Old Boys were constantly attacking and were on-top most of the time. It was not surprising, therefore, to find them leading at the interval by two placed goals to nil.

The first try came at the end of ten minutes, when Heck by quick side-stepping and a rapid exchange of passing with L. Bywater crossed the line near the posts for Spragge to score an easy goal. A little later Bywater scored another good try, as the result of his elusive swerve, which Spragge again converted.

Following the interval, Guy's rallied strongly, and with the forwards gaining possession in the scrums the backs were seen to greater advantage.

Popplewell was splendid in this half, and was responsible for the openings which led up to the Hospital's tries. As a result of the first effort, Giesen touched down near the posts, and soon afterwards Ryan followed suit. Both tries were converted by Hogbin, which made the scores level.

A ding-dong struggle followed and although Guy's were superior at this stage, the Old Boys found a gap in our defence and secured the verdict.

At the time play was in the visitors half, and following a scrum, Heck received and burst through with Bywater as his companion. From one to another the ball was sent until Bywater finally flashed over between the posts for Spragge to add the extra points.

At this stage, Giesen was limping badly and could not assist in checking their progress, otherwise it is quite possible that a draw might have been effected.

It was a splendid game and the forwards are to be congratulated upon their efforts in the second half of the match.

Team—W. B. Clegg; T. G. Robinson, J. Giesen, D. F. Ryan, A. G. Johnson; H. G. N. Cooper; J. Howell; J. R. F. Popplewell, C. D. Malone, R. A. P. Hogbin, G. F. Lashmore, T. Morgan, J. S. Batchelor, K. P. Smith, G. W. Hall-Smith.

Guy's v. London Scottish

THE home fixture with the London Scottish on Saturday, January 11th, proved a great attraction and it was very disappointing when, owing to the torrential rain and the churned up state of the ground, the game had to be abandoned ten minutes after the interval, with Guy's leading by two placed goals and a try (13 points) to nil.

Guy's fielded a very strong side which included W. Guy Morgan, the late Captain of Cambridge University, who has now taken up residence at the Hospital.

The reunion with his former colleague Windsor H. Lewis had been eagerly awaited, and with the limited opportunities that came their way, the two Welsh Internationals showed first-rate attacking form, and proved a constant menace to the Scottish defence.

In fact, considering the conditions which prevailed, it was amazing to see the greasy ball handled with such rapidity and accuracy.

Windsor Lewis was a tower of strength at half-back, and his lengthy and accurate kicking had much to do with the Hospital's monopoly of the attack.

From the kick-off Guy's pressed and Johnson missed an opportunity to score by over-kicking a cross kick by Robinson on the Scottish goal-line. A great rush by our forwards carried play again to the visitors line, and Malone threw himself over for an unconverted try.

An excellent kick to touch by Guy Morgan, followed by an equally fine forward rush by the Hospital pack compelled the Scottish to touch down, but soon afterwards W. H. Lewis checked a dangerous forward rush of the visitors and found touch brilliantly.

Then followed two of the most spectacular tries seen on the ground for some time, both as the result of passing of the highest standard.

The first came through the initiative of Johnson who, receiving the ball just inside the Scottish half, ran across to Guy Morgan. The latter cut clean through the opposition brilliantly and when faced by the full-back, passed inside to Windsor Lewis, who had backed up well, for the latter to score a glorious try behind the posts which Wailer converted.

From the kick-off, Giesen cleverly found touch with a beautiful kick to within a yard of the visitors corner flag. The Scottish forwards temporarily relieved the danger, but immediately afterwards another excellent round of passing between Giesen, Lewis and Morgan from midfield, enabled the latter, after giving the dummy to the full-back, to score a wonderful try behind the posts which Wailer again converted with ease.

Guy's continued to monopolise the game and were continually attacking on the goal line, but the Scottish eventually came away with a great forward rush and Wailer gained full marks for the way he saved the situation and found touch.

Another rush by the visitors pack was cleverly checked by Guy Morgan, who eventually found touch in the corner, but the whistle for the breather went before any attack could be developed.

The teams changed round without an interval, but the weather was so bad that after ten minutes play the game was abandoned at the score stated above.

Team—L. Wailer; T. G. Robinson, J. E. Giesen, W. G. Morgan, A. G. Johnson; W. H. Lewis, J. Howell; C. D. Malone, K. P. Smith, J. S. Batchelor, G. F. Lashmore, G. W. Hall-Smith, A. R. Clarke, R. A. P. Hogbin, J. R. F. Popplewell.

Guy's v. Birkenhead Park

AGAINST Birkenhead Park on Saturday, January 18th, Guy's gained a convincing victory by two placed goals and three tries (19 points) to a dropped goal (4 points).

It was one of the best performances put up by the Hospital fifteen this season, and from the spectators point of view it was the finest game seen at Honor Oak for some time.

With the exception of R. D. Green, who was reserve for England against Wales, the visitors fielded their strongest available side. Guy's, on the other hand, were without their hooker D. S. Clogg.

It was an ideal day and there was a large attendance when the Park kicked off. Guy's at once attacked and a fine round of passing between Giesen, Windsor Lewis and Guy Morgan broke down in the visitors 25, when a score seemed certain.

Immediately following, Windsor Lewis received from a loose scrum and cutting through brilliantly, he baffled the opposition to score a splendid try near the posts for Wailer to convert.

The visitors then attacked strongly, but Guy's put up a strong defence in their 25 and eventually drove the Park back to mid-field.

Guy's were penalised for feet-up, and Richardson tried a drop at goal and only just missed.

Following some good touch finding by Windsor Lewis, the Park pressed to our goal line, which was again relieved by Lewis.

A fine bout of passing between Lewis, Morgan, Giesen and Robinson was only checked five yards from the line.

The visitors responded gallantly and following a good round of passing and a great run by Briggs, Hogbin only just secured the touch down in a race for the ball, after the latter had punted over the goal-line. Birkenhead pressed in our 25 and Wilson, who was playing a fine game for the visitors, cleverly dropped a perfect goal.

T. Morgan was next prominent in a good dribble and Johnson missed a fine chance to add to the Guy's lead. However, a minute later, Windsor Lewis made a wonderful individual effort. Intercepting an attacking movement between Springman and Brabner, Lewis was away in a flash, and eluding the whole defence by clever swerving and side-stepping, scored a very fine try which was not converted.

The Park, through a good kick by Wilson, then advanced to our goal line. The ball came out to Wilson and the latter only just missed dropping another goal.

Another dashing raid by our forwards in which T. Morgan dribbled splendidly carried play to the Park's 25, but Springman retaliated with a good run. Punting over the head of Wailer, Briggs secured and was all but over when Robinson effected a great tackle and brought him down. Brabner next tried to break through, but a forward pass spoiled a promising movement.

Just before the interval W. H. Lewis electrified the spectators with a magnificent cut through the defence, and exercising excellent judgment gave to Johnson when faced by the full-back, for the latter to score in the corner to give Guy's the lead at the interval by 11 points to 4.

The resumption saw Park on the offensive, and from the kick-off, Brabner obtained a mark, but the kick was charged down and Giesen very nearly broke through. The Park forwards made a fine dribble to the Guy's line, but Wailer, who played

a splendid game throughout, tackled surely and saved a dangerous situation

Johnson then made plenty of ground on the wing, but his inside pass was intercepted by Roberts who missed a good scoring chance through overstepping the touch-line in our 25.

A fine breakaway by Robinson proved fruitless as Howell's pass to Windsor Lewis was intercepted by Wilson. The latter cut through brilliantly and gave Springman a clear run in, but Wailer came across and effected a wonderful tackle on the line when a score appeared certain.

The Park made determined efforts to get through, but the Hospital's defence was magnificent and never wavered. Robinson in particular, was very sure with his tackling, and another fine run with W. Lewis carried play well inside the visitors 25 before the latter was overpowered.

Following an excellent kick to touch, Morgan initiated a splendid attacking movement with Robinson, and the latter was only thrown into touch near the corner flag.

Guy's continued to attack, and following a fine movement between the three's, Batchelor secured in a line-out five yards from the goal line and registered an unconverted try.

This was followed by several extraordinary good efforts on the part of the three's, and eventually Windsor Lewis created a great opening for Johnson, who, after running half the length of the field and shaking off two or three opponents, scored a great try behind the posts for Wailer to add the extra points.

The whistle went immediately afterwards and Guy's retired worthy winners as stated.

It was a glorious game and every member of the team is to be congratulated on their excellent play.

Team—L. Wailer; T. G. Robinson, J. E. Giesen, W. Guy Morgan, A. G. Johnson; Windsor H. Lewis, J. Howell; J. R. F. Popplewell, C. D. Malone, R. A. P. Hogbin, J. S. Batchelor, T. Morgan, G. F. Lashmore, K. P. Smith, J. Kunovsky.

Hospital Information, etc.

Pass List

UNIVERSITY OF LONDON.

1ST EXAMINATION FOR MEDICAL DEGREES.

December, 1929.

A. P. Dale-Bussell.
A. G. Edwards.
E. Gareh.
John Greenhalgh.
J. C. Henry.
N. W. Irish.
E. H. Jones.
J. S. Stuart.
F. H. Weston.
D. A. Davies.

SOCIETY OF APOTHECARIES OF LONDON.

January, 1930.

Anatomy.

G. E. Ellison.
R. L. Soper.

Physiology.

S. Adams.

Papers by Guy's Men

A. C. Hampson, M.R.C.P. Case of Pernicious Anæmia not responding to Liver Treatment, *Lancet*, 1930, i, 22.

J. V. C. Braithwaite, M.D. The Significance of Oxaluria, *Brit. Med. Jour.*, 1930, i, 15.

Harold Chapple, M.Ch., F.R.C.S. The Use of Forceps and Cæsarean Section in Labour, *Brit. Med. Jour.*, 1930, i, 104.

Change of Address

W. S. McConnell, 9A, Upper Brook Street, W.1.

C. Aston Moody, L.D.S., "Brightside," Half-Way-Tree Post Office, St. Andrew, Jamaica, B.W.I.

Ronald L. Harward, High Street, Odiham, Basingstoke, Hants.

A. H. Curtis, L.D.S., Oxford Lodge, Hulse Road Southampton.

A. L. Wraight, "Rosedale," Darnley Road, Gravesend.

F. Felix Jones, "Firfield," 7, Surrey Road, Bournemouth.

Births

WILLIS—On January 4th, 1930, to Margaret, wife of G. S. Willis, L.D.S., R.C.S. Eng.—a son.

GIBBINGS—On November 27th, 1929, at Montagu Avenue, Salisbury, Southern Rhodesia, to the wife of Reginald J. Gibbings, L.D.S., R.C.S. Eng.—a son.

EDS. { J. B. B. / P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *8th February* 1930 — *Number* 1084

PASSIM

IT is about 100 years since Queen Victoria defied a strait-laced public opinion in the matter of anæsthetics in child-birth. After she had personally set the example, the relief of the pangs of labour became the privilege of those who could afford to pay an anæsthetist's fee.

A proposal has now been made by five influential ladies to extend these benefits to all those mothers who cannot at present afford them, and a fund has been opened for this purpose. While admitting that this principle of humanity is sound, we would ask if all the factors have received due consideration. For instance, are not already too many appeals being launched on a generous public? Is not radium a big enough bite for the philanthropist to masticate for the moment? Again,—granted that the appeal will be successful, should not some very well-defined and carefully thought-out programme of administration be published? How will the scheme affect the Panel Doctor, already so busy? How will he find time either to administer the anæsthetic or to arrange for an anæsthetist? How will it affect the practising midwife? Will she give the anæsthetic, or shall a doctor do so, while she delivers the child? The proposers of the scheme maintain that it will have a favourable effect on the maternal mortality by placing the mother in a stronger state of health to combat any possible after-effects, and by lessening the shock to the nervous system; but to what extent may not these factors be counteracted by the ordinary risks of an anæsthetic in the hands, often, we may expect, of an unskilled anæsthetist?

To what degree will it interfere with the training in midwifery of medical students and nurses, about which so much has lately been said? Must not the whole "extern" or "district" system be revised, to the detriment of the student or nurse, whose responsibilities, and, therefore, experience, will be diminished by the presence of a qualified resident anæsthetist?

Finally, what percentage of mothers of the lower classes would prefer an anæsthetic if given the choice? We doubt if it would be as much as 50 per cent.

We have pointed out a few only of the difficulties and doubts which must arise from such a proposal, many others are obvious.

Again we repeat—has due consideration been given to all the facts?

SOME fourteen days ago a group of eminent gynæcologists and obstetricians were seen to converge upon a well-known hostelry in the Strand. This was a forerunner of a series of important events. A few days later, with an upheaval that was little short of an earthquake, the College yielded up one of its oldest Residents, and on February 1st, a Guy's contingent travelled by various routes to Langley, Bucks, there to assist at the wedding of Mr. G. F. Gibberd.

We wish him every happiness and success, and, while we feel that his cheerful presence will be sadly missed in the College Dining Room, we are happy to know that he has not forsaken the Borough entirely, and we look forward to his return to St. Thomas's Street.

WE would like to call attention to a lecture which is to be given by Professor F. R. Fraser at the British Medical Association House, Tavistock Square, W.C.1, on Tuesday, February 11th, at 5.30 p.m. The title of the address is "Before the Finals: and After." This should be of interest to everyone, for the young medical man's life is divided into two periods, both of them full of difficulties, those few months of toil and anxiety immediately preceding visits to Queen Square, and those months of doubt and anxiety immediately following. If anyone can offer sound advice to those who must of necessity experience these two horrible phases, he should be worth listening to.

We learn with regret that Mr. G. A. R. Winston will, within the next few days, be retiring from the post of Wills Librarian, an office he has ably filled for the past ten years, one which he came to after seeing much varied service during the war, and which he leaves to take up an appointment at the Egyptian University, Cairo. During his stay at Guy's, he has been actively associated with the Musical Society and with the Employees' Association. We wish him all success in his new work.

It would very materially assist in the change over of Wills Librarians if all books borrowed from the Library were returned without delay.

The following House Appointments have been made —

House-Physician—
To Dr. Poulton—Mr. S. A. Scorer.
To Dr. Ryle—Mr. R. J. L. O'Donoghue.

House-Surgeons—
To Mr. Fagge—Mr. W. L. M. Bigby.
To Mr. Turner—Mr. S. M. Cohen.

Obstetric Resident—
To Mr. Chapple—Mr. W. D. G. Jones.

House-Surgeon in the Ear, Nose and Throat Department—
To Mr. Layton—Mr. R. A. Nash.

House-Surgeon in the Genito-Urinary and Orthopædic Departments—
Mr. E. H. Rink.

Ophthalmic House-Surgeon—
Mr. B. R. Medlycott.

Out-Patient Officers—
Mr. P. M. F. Bishop.
Mr. C. F. Cosin.
Mr. R. S. Bruce-Pearson.
Mr. S. J. Wheeler.

Assistant House-Surgeons—
To Mr. Hughes—Mr. G. J. Clark.
To Mr. Davies-Colley—Mr. W. J. Cotton.
To Mr. Bromley—Mr. J. K. Marshall.
To Mr. Slesinger—Mr. E. R. R. Mellon.
To Mr. Ogilvie—Mr. S. D. McClean.

We would draw attention to the valuable Albert Kahn Travelling Fellowships, details of which are given under Hospital Information on the last page of this *Gazette*.

Cases from Take-In Week

A Clinical Lecture by F. J. Steward, Esq., M.S., F.R.C.S.

Gentlemen,—I propose to take you over some cases from my last Take-In.

Case I.

Strangulated inguinal hernia—Spontaneous reduction—Operation—Use of living sutures.

A man, aged 35, was admitted with the following history. Two years ago he slipped when pushing a truck, and the next day discovered a slight swelling in the right inguinal region. This swelling gradually increased until it reached the size of a grape fruit and six months ago reached the bottom of the scrotum. You will notice that a swelling, which subsequently proved to be an inguinal hernia, appeared suddenly after a strain. This sequence of events is quite common and accounts for the lay idea of something giving way or a "rupture." The fact, of course, is that the strain or accident forces either bowel or omentum into a pre-existing hernial sac, for it is not possible to believe that a sac could be formed suddenly as the result of a strain. Nevertheless it is important to remember that rightly or wrongly the formation of a hernia in this way, although a potential hernia was already present, is accepted under the Workmen's Compensation Acts as an accident arising out of and in the course of the employment.

On the other hand, many herniæ develop gradually and without any definite history as to causation, and, in fact, are discovered accidentally. This applies both to the descent of a hernia into a pre-existing sac, and to the formation of a direct hernia in which the sac formation is gradual.

To continue, the swelling which was usually larger at the end of the day's work, was always reducible until the day of admission. On that day the patient started work at 7 a.m., and at 11 a.m. drank some ginger beer. Immediately afterwards he felt a pain at first in the testicles and then in the lower half of the right side of the abdomen, and noticed that there was a large swelling in the right side of the scrotum. He shortly vomited, and continued to do so at frequent intervals. When seen in the surgery, he had a large, very tense and tender inguinal hernia with little or no impulse on coughing. He was pale and vomited frequently. When I saw him a few hours later the pain and tenderness were less, the swelling was less tense, impulse was now definite though slight, and vomiting had ceased. Shortly afterwards reduction had taken place. Here you have a typical picture of fairly acute strangulation—the sudden pain shortly followed by vomiting, the tense hernial swelling now for the first time irreducible. As to treatment, should any attempt at reduction be made? Not if strangulation is acute and certainly present, for if the constriction is so tight that the circulation has been arrested no justifiable amount of force is likely to avail.

On the other hand, much harm may result, such as reduction en masse and other accidents, which time will not admit of my going into. The better plan is to put the patient to bed and give him a small dose of morphia or heroin. This may result in spontaneous reduction as in this case. Should, however, the condition remain unchanged, the proper course is operation without further delay.

After such an occurrence, it was clear that the man's safety demanded an attempt to cure his hernia by operation. This was done three days later by Mr. Northfield. The sac, which was a large one, was removed in the ordinary way, and it was then found, as expected, that the internal ring was greatly enlarged. The defect was repaired by means of living sutures in the following manner.

A strip of fascia lata some 12 inches long was removed from the outer side of the right thigh and cut into lengths about a quarter of an inch wide. Sutures of fascia lata thus formed were then passed between the conjoined tendon and Poupart's ligament behind the spermatic cord without undue tension, and in several layers so as to form a lattice work in the position of the stretched internal ring. The external oblique aponeurosis was then sutured and the wound closed.

The use of living sutures of fascia lata is the result of experimental work carried out by Gallie and Le Mesurier of Toronto, in connection with the transplantation of fibrous tissues in the repair of anatomical defects. In one series of experiments incisions were made, some longitudinally and some transversely, in tendon, fascia, and aponeurosis, and sutured again. The specimens were subsequently recovered after various intervals. They showed that the character of healing was largely dependent upon the degree of strain to which the union was subjected.

In the case of longitudinal incisions subjected to little or no strain, healing was perfect, but where transverse incisions were made and the union was subjected to strain, the edges became separated and little union took place. If the sutures used were of non-absorbable material and the edges of the incision were made to overlap, the union was somewhat stronger, but any marked strain resulted in the sutures cutting out and the edges becoming separated. Further experiments were then made with living sutures consisting of strips of fascia removed from rabbits' backs. These were threaded on a needle and used to suture the gaps left by their removal, the edges being left apart so that any strain fell upon the sutures. The results were extraordinarily satisfactory, for after a period of inflammatory changes, the sutures were found to be firmly united to the stitch holes and the sutures themselves remained alive and with very little change even after many months and in spite of being subjected to considerable strain. The promise of these experimental results has already been borne out by the successful application of the method to various surgical procedures such as the repair of tendons, ligaments, fasciæ, hernial orifices, etc., and no doubt many other uses will in time be found. The most striking case I have had was a very large ventral hernia in which I filled the gap between the separated aponeuroses by means of a living filagree formed by a large number of sutures of fascia lata passed in all directions. Some months after the operation, the site of the former hernia was occupied by a very firm mass of fibrous tissue with no sign of bulging.

Case II.

Ruptured liver, laparotomy, auto-blood transfusion.

A man of 22 was admitted at 6 p.m. after a street accident, the wheel of a cart having passed over the lower thorax.

7.30. He was pale, cold, clammy, restless, complaining of difficulty in breathing and pain in the upper abdomen; pulse 100, very thin and thready, no sickness, no cough, had not passed urine; bruising over right lower ribs; right upper half of the abdomen was tender. He was given some morphia and put under the resuscitation cradle. Here is a typical example of the severe shock that results from abdominal injury and that may be associated with visceral injuries.

8.30. Restless, slight blood-stained sputum, laboured respiration, impaired air-entry right base, tender over lower right ribs, no evidence of pneumothorax or hæmothorax, liver dullness normal. Pulse now 140.

9.30. Seen by Mr. Ogilvie, who decided to operate. Laparotomy disclosed a large tear in the right lobe of the liver, and a quantity of blood in the peritoneum. A catheter drew off slightly blood-stained urine. Kidney explored through the same wound. No laceration was felt, but a large retro-peritoneal hæmatoma was found. The tear in the liver was packed with gauze and a large rubber tube brought out through a stab wound. The blood in the peritoneal cavity was collected, citrated and filtered. 10 ozs. of gum and 10 ozs. of his own blood were given intravenously.

Next day blood was still oozing through the dressings, the pulse was still rapid and feeble, and there was some cough and difficulty in breathing. He was given 10 ozs. of his own blood and 10 c.c. of hæmoplastin at noon, and a further 15 ozs. of blood at 11 p.m. Bleeding, however, continued, and he died at noon next day.

This case, in the first place, suggests an exploration of the question—how should a case of abdominal injury be dealt with? A severe abdominal injury may result in either of three conditions, (1) shock alone, both general and local, (2) shock plus bruising, and (3) shock plus bruising plus rupture of viscera.

It is practically impossible to determine which of these conditions is present when the case is first seen, for the primary shock alone may be so severe as to kill the patient outright, or it may be comparatively slight in degree even when severe visceral injuries are present. At any rate, it would be useless to operate in the presence of severe shock, for the operation would in all probability be fatal even though the injury proved to be slight. The proper course is to treat the shock by morphia and general resuscitation measures and to carefully watch for any change. The result of this treatment may be (1) Steady and lasting improvement ending in recovery in the case of shock, or shock plus bruising. (2) The condition, both local and general, becomes worse as it did in the case under consideration. This usually means very severe visceral injury, probably associated with severe hæmorrhage. In this event the outlook is, of course, very grave in any case, but although the chance of success must be a very slender one, an immediate laparotomy should be done, this being the only possible means of saving the patient's life. (3) Improvement in the general condition followed some hours later by relapse, usually in the form of rising pulse rate, vomiting, rigidity and tenderness. Such a change is likely to be due to a ruptured viscus. Here again operation is indicated, and is undertaken with a reasonable hope of success.

To turn to another point, you will have noticed that the blood found in the peritoneal cavity was collected, filtered, and citrated and afterwards re-transfused, some at the time of operation and some later. There is nothing new about this application of transfusion or auto-blood transfusion, as it is called, for it was first used over fifty years ago by a British surgeon in India in a case of ruptured spleen. Subsequently, reports of cases were published from time to time, but no great amount of interest or confidence was shown in regard to the method until 1914, when Thies, of Leipsic, published three cases of ruptured tubal gestation in which he successfully made use of auto-blood transfusion. He published a further eight cases in 1915, 39 cases were published by Lichtenstein in 1919, and since then there have been many others. It was at first very naturally feared that serious reaction might result owing to some change having taken place in the blood, or again that there might be a danger of introducing sepsis. Both these fears have, however, been set at rest by the result of experience. For instance, 164 cases in European literature were collected by Burch. Among these there were 14 deaths, and of these in only one was there a suspicion that the blood was toxic. In four other cases there was a non-fatal reaction, but in none was there evidence of the introduction of sepsis.

The cases have been mostly ruptured tubal gestation, but the method has been used for a number of other conditions, such as ruptured spleen, nephrectomy, amputation at the hip joint. Traumatic hæmothorax would certainly be an indication.

I had a good example of the value of the method in August last, a case of ruptured spleen in a man aged 45. About three pints of blood were recovered from the abdomen and over two pints re-transfused. The patient recovered.

The safety of the procedure having been proved, it clearly should be made use of whenever possible on account of the obvious advantages over ordinary transfusion that neither donor nor grouping are required.

As regards method the blood may be recovered from the abdomen by a suction apparatus, into an exhausted bottle, or failing the necessary apparatus it may be ladled with a small cup or similar utensil. In either case the bottle or measure into which the blood is received must already contain two ounces of sterile 2 per cent. solution of sodium citrate and to this may be added eighteen ounces of blood. The citrated blood should then be filtered through eight layers of sterile gauze into a glass measure which should be kept warm by standing it in a basin of hot water. Throughout the citrated blood should be stirred well.

Case III.

Acute cholecystitis—Operation.

A stout, flabby woman, aged 61, was admitted on account of severe pain in the right side. The trouble began in June last, when she was taken with pain in the right flank, which continued for some three days and then passed off. The attack was not accompanied by vomiting or other definite symptom except that her urine was dark in colour. In October she had a second attack, which ran a similar course. After this she remained well until two days before admission, when a third attack commenced which was more severe in character and was associated with nausea and diarrhœa. On admission there was slight pyrexia —99.6°, the pulse-rate was 100, and the tongue furred. The abdomen was somewhat distended, but moved well on respiration. On palpation a

mass of considerable size could be felt extending downwards from the right hypochondrium. The swelling was tender, and moved on respiration. No upper limit could be made out, it did not extend into the loin, and below it ended at about the umbilical level. The urine contained urobilin, a few leucocytes and granular casts, and on cultivation gave a mixed growth of bacillus coli communis and staphylococci. Although it was not possible to say whether this mass was inflammatory or neoplastic, the history and general condition of the patient, the tenderness, and the consistence certainly pointed to an inflammatory condition. As to its origin, it did not appear to be renal, in spite of the condition of the urine, for the loin was not filled up as would be the case in a perinephritis, and the general shape of the mass was unlike that of an enlarged kidney.

The history of recurrent attacks would fit in with either appendicitis or cholecystitis, and the swelling might be associated with either condition, but because its lower margin was rather above the usual site of an appendicular swelling and its upper end was lost under the costal margin in the gall bladder region, the conclusion reached was that the swelling was an inflamed, possibly suppurating gall bladder surrounded by an inflammatory mass, and probably the result of impaction of a gall stone in the neck of the gall bladder.

In regard to treatment, I decided against immediate operation for several reasons. In the first place, the patient was 61, old for her years, and very stout and flabby—a decidedly bad operation risk. In the second place, there was a fair chance that the gall stone would drop back into the gall bladder, and the whole condition clear up. The question of operation could then be considered at a later date when the patient was in better condition. Further the presence of so large an inflammatory mass clearly proved that the trouble was localised and that the risk of a spreading peritonitis was small. However, during the next three days the temperature continued to reach 100° and the pulse rate rose from 90 to 110 per minute. In view of these changes I decided not to delay operation any longer. I made an oblique incision over the tumour and found that it consisted of a mass of infiltrated omentum, mesocolon, and bowel. On gently separating adhesions a much distended gall bladder, deep red in colour, was exposed. An incision into it gave exit to a quantity of mucus and pus and to four large gall stones about half an inch in diameter. One of these was lodged in the ampulla of the gall bladder and was the cause of the trouble.

I fixed a rubber drainage tube in the gall bladder by means of a purse-string suture and closed the wound around it.

Although the ideal treatment in cases of gall stone is the removal of the gall bladder, I decided upon drainage only in this case for several reasons. In the first place, the patient's general condition forbade a prolonged and difficult operation, which cholecystectomy would clearly have been in view of the adhesions present and the depth of the wound owing to the physique of the patient.

In the second place, it was by no means clear that there were no stones in the ducts, in fact, the presence of bile in the urine rather strongly pointed to the possibility of such being the case.

Now, it may be laid down most emphatically that the *gall bladder should not be removed unless it is certain as may be that the ducts are free from stones.* Sometimes there are stones in the ducts when least expected, and the removal of the gall bladder is followed by a fistula or further attacks of pain and jaundice, which necessitate very difficult secondary operations.

In the third place cholecystectomy was contra-indicated by the condition of sepsis both general and local, which undoubtedly would increase the risk of complications, such as thrombosis, embolism, and pneumonia.

Guy's Hospital Gazette

(ESTABLISHED 1872)

A Journal of Hospital News, Medicine, Surgery and Dentistry

Published on alternate Saturdays. Price 9d.

Editorial and Publishing Office :—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, 12s. 6d. Post Free, payable in advance.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

The Superior Sex

By OMEGA

[Readers of De Quincey will remember that, by way of preface to the delightful paper "Sortilege and Astrology," he tells us that in his study he had a large disused bath that served as a reservoir for his MSS. This bath was full to the brim with papers written by him, to him, for him, of or concerning him, and against him. Being asked at short notice for a contribution to a literary miscellany, he agreed to let the petitioners have three dips into the reservoir and to be satisfied with one or other of the papers they might fish up. The Editor of this *Gazette* has inherited a somewhat similar source of material, to wit, a vast drawer full of more or less literary matter. Being hard put to it for copy for this issue, he decided to take three dips into the drawer and to stand by the result. The paper here printed was number three of the dipping. It is hopelessly behind the times, for it bears date October, 1922. That, however, gives it an added antiquarian interest. It is evidently written by a middle-aged, old-fashioned, but not unkindly man, and if it provokes a reply from the other side it will have served its purpose.—ED.]

THIS little disquisition was suggested by a meeting of the National Council of Women, who had recently assembled at Cambridge to discuss Woman's Place in Life and the Emancipation of Woman. The subject is a painful one, and a verdict for either competitor will get me into trouble. Mere Man, if he lose the cause, will think me a nympholeph; and in the other alternative how can I, except by carefully concealing my identity, hope to fare better than the enchanting Orpheus, who offended the women of Thrace with the result that—

"by the rout that made the hideous roar
"His gory visage down the stream was sent,
"Down the swift Hebrus to the Lesbian shore"?

"The Superior Sex"; superior in what precise particulars? By what specific tests? Three tests at once suggest themselves—the test of physique, the test of intellect, the test of morals; and, to avoid vague generalities, to one or other of these let us subject characters chosen impartially alike from fiction and history.

First, then, as to physique. For physical superiority we must look presumably either to beauty or to capacity for strenuous and prolonged exertion. Some woman whose face was a sebaceous trickle, or some man strangely smitten therewith, once uttered the lie that beauty is only skin deep. All the beautiful *statues* that I have seen have been quite skinless. We all know that beauty consists chiefly in facial expression and in the form and poise and proportion of the whole frame. Here there need be no bickerings, for in these respects the average grown-up of both sexes is not merely blasphemously ugly, but positively ridiculous. Praxiteles needed separate models for every feature, joint and limb of his ideal female figure, the Aphrodite; and Myron probably needed a whole township for each detail when he fashioned his Discobolos. Even the British Secretary of State* for the Colonies, as a *Sunday Pictorial* camera-man snapped him after his dip at Deauville, would hardly have sufficed the ancient artist. But to women (in spite of sundry little occasional additaments) we readily give the palm for face and complexion, though the morning face of the average boy does not suffer by comparison with that of the average girl. Both of these latter might have supplied Wordsworth with intimations of immortality less questionable than those he relied on in his famous Ode.

But what of sheer strength and endurance? At the Cambridge conference just mentioned, the President instanced the Tibetan woman who carried a heavy tent for the Everest explorers. The reference was either (and probably) pointless, or it was meant to prove the parity of men and women (and was, therefore, absurd) or it was meant to show that *some* women are as strong as *some* men (and was, therefore, banal). Sometimes we find a strong-armed wench like Charlotte Corday who can stick a knife into the flabby flesh of a Marat as he sits helpless in his bath, or a stout-limbed girl like Grace Darling who can manage a rowing-boat in a choppy sea. Mrs. John Wesley, too, showed athletic prowess in dragging her husband round the room by the hair, though it must be remembered that the Founder of Methodism was a little man; and indisputably Mrs. Caudle showed endurance beyond that of her nominal lord; but such Amazons are rare. Neither *Argo* nor *The Quest* had a complement of women; it is not Troy that women besiege, but Selfridge's; unlike Hector, they fling not Phrygian fire among the Grecian hulls, but to empty country houses they have been known deftly to apply rags drenched in paraffin; they storm not the crags of Gallipoli, but they kick the shins of Augustine Birrell, essayist less engaging only than Charles Lamb, and they can easily elbow off the foot-

*His initials were W. S. C.

board of a tramcar a meek and unoffending creature like the writer of this paper. It was the man Samson who carried off the gates of Gaza and slew a thousand Philistines with the jaw of an ass ; *with her own* Mrs. S. extracted from her spouse the fateful secret, and the trophy she bore away was the less weighty one of a bunch of hair—probably to serve as a decoration for her hat, or why did the chorus on her approach (see the *Agonistes*) exclaim :—

" But who is this ? What thing of sea or land ?
" Female of sex it seems,
" That so bedeckt, ornate and gay
" Comes this way sailing
" Like a stately ship
" Of Tarsus, bound for th' isles
" Of Javan or Gadire,
" With all her bravery on and tackle trim,
" Sails filled, and streamers waving ? "

Think not that I *reproach* them for the lesser magnitude of their physical exploits ; I would not have the mother of the Gracchi neglect her bay-jewels in order to put the weight, or Cordelia desert her distracted father to compete for the heavy championship at the N.S.C. ; but *if* strength and endurance give any superiority, I fear it lies with man and not with woman.

In the second place, what of intellect ? Intellect is a wide term ; it includes ability to organise the home, the business, the trading concern, the factory, the railway or steamship line ; to heal the sicknesses or settle the disputes of mankind ; to manage the affairs of localities, states and empires ; the ability to amass learning, to conduct or understand subtle dialectics, to discover the hidden processes of nature, to contrive mechanical devices, to design stately buildings, to pare the marble into beauteous life, to paint the light that never was on sea or land, to conceive and record harmonies " such as the meeting soul do pierce," and in the drama, the poem, the novel, to show the whole range of human experience transmuted by imaginative genius.

Concerning one or two of the departments of intellect here specified, I must put in a very strong *claim* for women. When the Apostle Paul—quite a commonsense man for the most part (by the way, he would have fallen off his horse again if he had read in *The Times* " At Holy Trinity Church, with the approval of the Bishop of Ely, Miss Maude Royden *preached* " !). When the Apostle said, " Let the woman mind the house," he did not, I think, mean to condemn woman to drudgery and indignity, for he *was* a gentleman ; and perhaps he would go as far as I do and claim that good house management—good, mind you—needs intellect of no mean order. That it needs virtues everyone recognises, but I want to insist that it needs plenty of brains as well. I have tried it, with results ! And I have tried housekeepers, too, and only heaven knows which is the lesser evil.

All the other activities mentioned differ from this in one important respect ; of all of them it may be said either that women have simply lacked opportunity or have been positively denied opportunity of distinguishing themselves ; and that consequently their partial or even total failure so to do is no proof of intellectual inferiority. If, as a mere logician, I admit—as I must—the force of that argument (unless or until the physiologist steps in to tell me I am overlooking facts mysteriously, but demonstrably, involved in sex organisation) ; then also it would seem that as a mere logician I am bound to say that the argument proves some defect of womankind in allowing themselves to be denied the exercise of their faculties—some defect of physical power or will power. We can't have it both ways. When the careers *have* been open to women they have indisputably shown great capacity, and we are agreed that sex should be no barrier to opportunity; always with certain reservations that one need not indicate beyond saying that, in administrative affairs, while the general sentiment of the world would not deny to women jurisdiction over women, and does not shrink from giving men jurisdiction over women, it does recoil from giving women jurisdiction over men. The world may be irrational and antiquated, but there it is.* To particulars, however. Women have done invaluable work in certain departments of local government ; many of us (the writer for one), know from experience the exquisite skill and insight and devotion of the woman surgeon, doctor and nurse ; and there is no obvious reason why Portia should be the only legal practitioner. In activities that are dependent for their exercise upon traditional knowledge still jealously guarded by cliques of men, women may one day show themselves the equals or superiors of men, and their lack of performance is no proof of mere intellectual inferiority ; but why has no woman yet planned a Brooklyn Bridge, a Rheims or St. Paul's Cathedral, a Mont Cenis Tunnel, an Assouan Dam, a Cape to Cairo Railway, and why did not some woman anticipate the printing-press or the spinning-jenny ? Perhaps access to the necessary knowledge was denied.

But in those activities of the *imagination* which even vile man can hardly be said to have denied, it would seem that women have practised a little too much modesty, economy or reserve, or have

*Does the recoil still exist?—Ed.

been a trifle blameworthy for negligence or thoughtlessness. Aspasia really should not have left the adornment of Athens to Phidias; Mme. le Brun, Rosa Bonheur, Henrietta Rae, Lucy Kemp-Welsh, Elizabeth Forbes, might well have had more companions than they can boast; and how nearly might the harmonies of earth have rivalled those of heaven had not their production been absent-mindedly left to Bach and Handel, Haydn, Mozart, Glück and Beethoven, Rossini, Verdi, Stainer, Sullivan. In letters the record is better, though not blameless. Fanny Burney should not have waited till the reign of our George III to take up (for a far different purpose) the pen dropped by Sappho some six centuries before our era. The authors of *Don Quixote, Tom Jones, The Bride of Lammermuir, Les Miserables,* were all men; but we could not spare Maria Edgworth, Jane Austen, the Brontë Sisters or Mrs. Gaskell; and is not George Eliot one of the glories of imaginative prose literature? Shakespeare was presumably a man, but what of his little-known rival? J. S. Mill in his autobiography tells us that as a boy, being encouraged by his father to practise various forms of composition, he wrote tragedies "under the inspiration not so much of Shakespeare as of Joanna Baillie," whose *Constantine Paleologus* in particular appeared to him "one of the most glorious human compositions"; and he adds that at the time of his autobiography in 1870, he still thought it "one of the best dramas of the last two centuries." This commendation led me to purchase Joanna and to read her masterpiece with strong antecedent sympathetic bias. Even if I am bold enough to prefer the gay wits of the Restoration and the author of *The School for Scandal,* I admit that most persons might place Mill's judgment before mine. Again, is Elizabeth Barrett really as great as Robert Browning or can Christina Rossetti and Jean Ingelow, beautiful as they are, be held the compeers of Chaucer and Spenser, Milton, Shelley, Byron, Wordsworth and William Morris? In far other realms, has any woman yet vied with a Darwin in patient investigation of nature, is Mme. Montessori a co-authority with Locke on the human understanding, or is even Miss Pankhurst the dialectic fellow of a Newman or a Balfour? As amassers of learning, women, when given opportunity, undoubtedly show great ability; but, unfortunately, the greater part of what goes under the name of learning should be amassed for one purpose only—to be thrown into the dustbin.

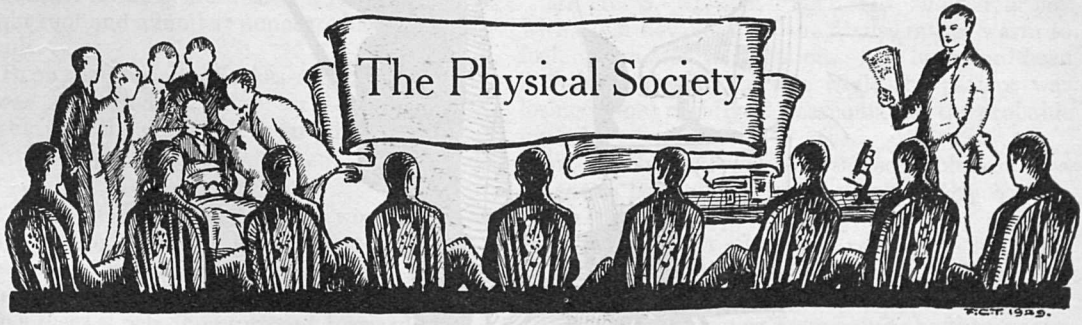
Physical strength and mere brains being now, so to speak, knocked out to everybody's dissatisfaction, let us take a glance at morals or virtues. Incidently it may be remarked that these terms must be repugnant to the idealist and the feminist respectively, for "morals" seems to mean conduct that is customary, and "virtue" that which becomes a man. But let that pass as an etymological whimsicality. Virtue is as wide a term as intellect; therefore, lest we beat the air, let us see what we mean by it. It *is* rather appalling to find that even according to the pagan Aristotle we have to be, or may be, virtuous in twelve distinct ways; but let us for a moment face this formidable dodecalogue. As to active martial *valour* can debate arise? Even as regards mere *courage,* general or occasional, it is rare to find a man who uses Price's night-lights or who jumps on to a table if a mouse or a spider shows itself friendly; but as for sustained *fortitude,* the patient endurance of suffering, hardship or painful effort, the average woman is surely far and away man's superior. What of *liberality*? The average man is despicably mean. He will squander his cash to try to cut a figure among his better-off associates, but to his wife he will plead poverty and threaten bankruptcy; and the charity that thus begins at home stops there. On the other hand, the notices that appear in the press to the effect that Mr. Grubbins will not be responsible for debts contracted by Mrs. G., seem to show that women are often too liberal—with their husband's credit. Honours, or dishonours, thus seem divided in this matter; still it was a poor Nigerian widow who gave to Mungo Park her last morsel of meal. In *temperance* respecting hunger and thirst the verdict can go only one way: man is more than inclined to "do himself well." *Magnificence,* in an age wherein we have been exhorted to wear ol' clo', is become a vice; it shall, therefore, be overlooked. From *decorous wit* the generality of mankind and womankind are equally exempt, but even at this moment it may be that the eyes of one Aristotle himself are twinkling and his lips curling into a grave smile as he listens to the talk of the author of *The Decline and Fall of the Roman Empire.* What of *truthfulness*? "All *men* are liars," said one; but by his own admission he spoke in haste; therefore, like all epigrammatists, he told only *half* a truth.

What is a cat? Is not a cat a creature that shows resentment not duly limited? If so, then from the absence of a parallel designation for resentful man it may be supposed that he has the advantage in the virtue of *gentleness* as anciently conceived. Surely we are agreed that Procne and Philomela, though grievously wronged, went a little too far in serving up to Tereus as casserole of chicken the flesh of his own children. If it be said in defence that they had the precedent of Jason, who instigated Medea to persuade the daughters

of Pelias to perform (certainly under a misconception on their part) a mincing and boiling operation on their poor old father, we must reply that Medea had already shown her aptitude by the complete vivisection of her sweet little brother Absyrtus. These experiments are not likely to be repeated nowadays. If men are, on the whole, less prone than women to show undue resentment, it may be the case that in the matter (fortunately rare) of belittling, denigrating and inflicting wanton pain, the few bad of one sex balance the few of the other. In respect of *justice* or uprightness as opposed to all law-breaking, woman must take the palm, being naturally a little timid; but in respect of this same virtue as opposed to grasping or unfair dealing is there much to choose? While the king was in his counting-house fondly fingering his cash extorted from his industrious subjects, the queen, you will remember, was taking a surreptitious snack from the honey-pot.

Morally, then, the sexes appear to be about on an equality. No woman, presumably, will deny or be aggrieved at the greater brute strength of man. As regards intellectual power and its manifestation a possible grave misconception must be removed. If I give precedence to man, do I assert that every husband is the superior of his wife, every brother of his sister, or myself of even a single woman-reader of this paper? Nothing so foolish; but merely that, if we take the achievements that are the glory of our common humanity, by far the greater number of them have been as plain matter of fact achievements of men. To this it may be replied that, even if such is the case, it does not establish sex superiority in general, but only that a few gifted men have in these particulars stood above all other members of the race. Though the margin is considerable, I am not in a position to dispute that reasoning even if I would. Indeed, I strongly object to the word superior as used in the phrase under discussion, for that involves the correlative inferior, and that in turn carries with it a stigma. *Disparity* there is, essential and fundamental, and this should be freely and fully recognised. Despite any little flippancies that may have intruded themselves into these jottings, the writer is really reverent to the point of being old-fashioned, and it is because he reverences women that he would have them different from men. To him it is matter for profound regret that the pressure of a modern economic system has forced women in such enormous numbers to be, not the competitors, but the coadjutors, of men. The industrial struggle almost always, and—though in a less degree—the struggle in the more combative professions generally, has a hardening tendency, and it is not well that we should *all* be estranged from the gentler charities. The writer would put back the hand of time and would emancipate women—not from a supposed domination, but from all that hampers them in the fostering of the more delicate elements of feeling. To be womanly is not to be effeminate; and if, by a mistaken chivalry, the writer seems to be an old fogey who would keep women in a sphere apart, does he put upon them any dishonour when he would have them content to be unassailable as Imogen, undesigning as Desdemona, filial as Margaret Roper, scholarly as Jane Grey, energetically compassionate as Florence Nightingale, heroic as Edith Cavell?

OMEGA.

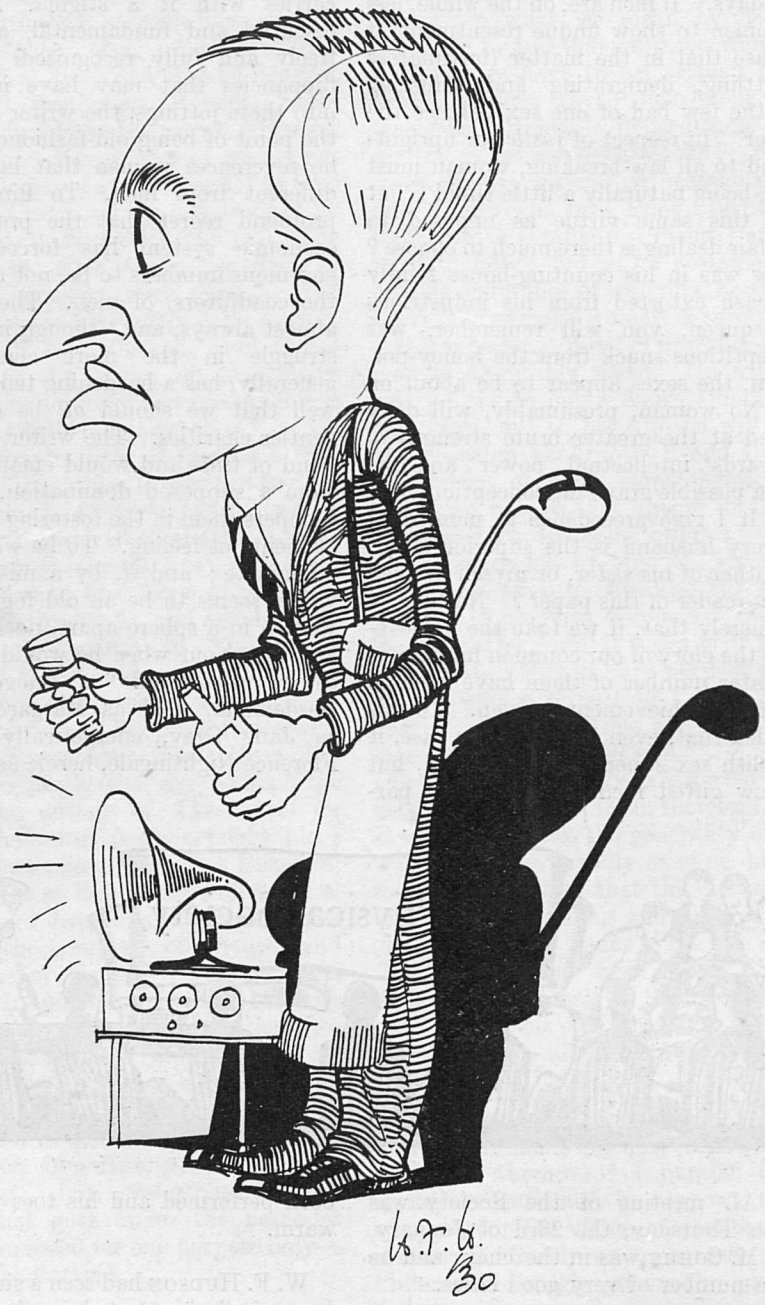


A CLINICAL meeting of the Society was held on Thursday, the 23rd of January, Mr. S. M. COHEN was in the chair, and he had collected a number of very good cases.

Mr. D. McGREGOR showed the first patient, an elderly man who suffered from threatened gangrene of the toes. Periarterial sympathetectomy had been performed and his toes were now pink and warm.

W. F. HUDSON had seen a similar case which had been similarly treated in the first instance, but later, unfortunately, by amputation. He believed that certain German surgeons now tied the femoral artery and vein with very good results.

BOROUGH TYPES—II.



J. J. C., The Warden's House

S. M. COHEN explained these results as being due to the venous stasis which was produced.

F. H. STEVENSON failed to see how such stasis could improve the oxygen exchange of the tissues and he was supported by W. F. HUDSON, who explained that the improvement was due to the opening of an efficient collateral circulation.

T. F. TODD doubted whether many sympathetic fibres were removed by stripping the vessel of its adventitia and advised section of the grey rami.

G. MCGREGOR drew attention to the man's nationality, a Russian Jew, who, further, ate rye bread.

R. E. SMITH asked for an explanation of the restriction of this disease to Russian Jews, and he pointed out that it must be more than coincidence. Those cases which had not appeared in Jews, had been in Scotchmen of Hebraic descent.

Mr. S. W. WRIGHT recounted the history of an elderly man who had precordial pains, orthopnœa and fainting fits. He had an enlarged heart, an aortic to-and-fro murmur, a Corrigan pulse and a positive Wassermann reaction.

F. H. STEVENSON said he had been unable to feel a tracheal tug and diagnosed simple syphilitic aortitis.

P. V. READING considered that a lumbar puncture would not be amiss, as there were absent ankle-jerks and an irregular, sluggish pupil.

B. SOUTHWELL reminded the previous speaker that the man worked in a lead-paint factory, and lead was notably destructive of tendon jerks.

S. M. COHEN diagnosed an aneurysm, but did not consider that tabes was altogether excluded.

S. W. WRIGHT replied that X-ray examination had revealed nothing more than a small gland at the right root and a lumbar puncture had produced no result.

H. BLOOM suggested a Stokes-Adams syndrome, and was supported by an observation of J. C. COLBECK that the pulse was definitely slow during one of these fainting fits.

Mr. T. F. TODD showed an old woman whose skin was covered with soft, pedunculated tumours; microscopical section had shown them to be cellular fibromata. A diagnosis of Von Recklinghausen's disease was therefore put forward.

H. BLOOM was sure that the tumours were lipomata; he did not place much trust in microscopical examinations.

R. E. SMITH considered the condition to be a typical neuro-fibromatosis. He briefly described an interesting case in which multiple fibromata had mimicked osteomalacia and another case of a neurofibroma on the eighth nerve, which in a rash moment, he stated to be the only tumour within the skull, which was amenable to surgical removal.

S. SHONE would like to have some pigmentation present to completely clinch the diagnosis. He contradicted R. E. SMITH'S statement about surgical removal; endotheliomata could also be removed.

R. STEWART HARRISON reminded H. BLOOM that all fibromata are not hard; they had their softer moments.

Mr. J. C. COLBECK had two cases to show. Both patients had large spleens, also myelocytes and an excessive number of polymorphonuclear leucocytes in their blood.

E. R. MELLON considered deep X-ray therapy to be of as little curative value as morphia in the treatment of leukæmia.

W. F. HUDSON asked what were the actual effects of raying the spleen.

S. J. WHEELER asked for details of the new phagocytic index technique.

J. C. COLBECK explained the effects of deep X-ray as far as they are at present understood, and illustrated his remarks with allusions to the eggs of the sea-urchin. He pointed out briefly the difference between the opsonic and the phagocytic index, and explained the steps in the experimental determination of the latter.

E. R. MELLON then closed the discussion with a tale illustrating the dangers of symptomatic treatment: A woman, he related, had amenorrhœa and progressive, abdominal enlargement; to the surprise of her relatives, however, she had, not a baby, but myelocytic leukæmia.

Mr. R. S. BRUCE-PEARSON showed a boy with a hard swelling on the fibula, rather warm to feel, of five months duration. The lump had been increasing steadily in size while the patient was losing weight rapidly. A sarcoma was the probable pathology.

W. F. HUDSON would not pledge himself to a diagnosis before hearing the result of the Wassermann reaction.

P. V. READING advised X-raying the lungs for metastases, as the patient had had a distressing cough for the last fortnight. He pointed out the dangers of a biopsy and suggested the therapeutic test of watching the response of the sarcomatous mass to deep X-ray therapy.

S. M. COHEN believed that exploratory incision of sarcomata was safe, if a tourniquet were applied both above and below the tumour, and if the tissues were cut with the diathermy knife.

R. S. BRUCE-PEARSON stressed the presence of pain as an important diagnostic point, and he

considered the best treatment to be an amputation at the hip.

Dr. HAMPSON discounted the diagnostic value of pain in these cases and quoted a case in support of his statement.

Mr. W. M. BIGBY told of an actor, who, with many empty bottles behind him, now had a large liver and early morning vomiting.

S. J. WHEELER inquired whether such vomiting was pathognomonic of alcoholic gastritis.

S. SHONE did not think that the large liver corresponded to the advanced stage of the patient's clinical history. He was inclined, taking into account the patient's leucopenia, to diagnose splenic anæmia.

K. TAYLOR had palpated a large spleen and supported this diagnosis.

H. RICHARDS suggested a thorough search for a primary form of carcinoma.

W. M. BIGBY was forced to admit that there was altered blood in the fæces; but he stuck to his diagnosis of early cirrhosis.

At this moment R. STEWART HARRISON drew a large red-herring across the scent with a mention of Kinnier-Wilson's disease, and among the ensuing remarks the only one of any merit was that of R. E. SMITH who suggested that the meeting should pass on to the next case.

This was a girl of eighteen. She had had a mid-line swelling in her neck since birth; at the age of three years a cervical gland had been removed, and now she had another swelling in the sub-maxillary region on the right side. Mr. F. H. STEVENSON, who showed this case, inclined to a diagnosis of ectopic thyroid gland.

J. W. FERGUSON and S. J. WHEELER simultaneously said "dermoid."

S. SHONE enlarged upon this with the suggestion that the submaxillary swelling was a branchial cyst.

W. F. HUDSON did not say what he thought it might be, but advised aspiration through a wide-bored needle to settle the diagnosis.

Mr. D. ERSKINE showed an elderly man who was under treatment for dysphagia. He had two soft masses on the sides of his throat, an epithelioma on the back of his tongue, and two hard glands at the angle of his jaw.

S. M. COHEN then asked for information about the value of radium and deep X-ray used together.

R. S. BRUCE-PEARSON quoted Dr. Watt in saying that radium should not be applied until two months have elapsed since the last dose of deep X-rays.

Mr. G. BARLOW SCHOFIELD described a lump on the jaw. The patient, a commercial traveller, had had two such lumps. One had been removed by his doctor, the second had been overlooked at the time.

S. SHONE lamented that the man's physician had not had the first lump examined microscopically. Personally, he was all for the diagnosis of sebaceous cyst.

G. MCGREGOR cynically observed that the lumps were the manifestations of an occupational disease.

G. BARLOW SCHOFIELD inclined to a diagnosis of a dermoid, though he would not altogether exclude a myxo-chondro-sarcoma of the parotid.

The remarks were now growing shorter and shorter, and watches were often consulted, so that the chairman without further ado, declared the meeting closed.

PHYSICUS.

Problems in Orthodontics

An Address to the Dental Society, January, 1930, by R. Cutler, L.R.C.P., M.R.C.S., L.D.S.

GENTLEMEN,—To-night I have been invited to consider with you a subject which should be of the greatest interest to us all—Orthodontics; and while not hiding from you my ignorance of all but the larger issues, I feel that this sensibility of ignorance is the first step in the acquirement of true knowledge, so that my remarks may be of help to those who are, as yet, some steps behind me in the rocky path of experience.

For ease of subsequent discussion the subject matter might advantageously be divided up under certain well-defined headings, so that each might be the more conveniently considered, and they are as follows:—

(1) The need for orthodontic treatment.
(2) The value of orthodontic knowledge to the practitioner.
(3) The interest attaching to the practice of orthodontics.
(4) The difficulties met with in the practice of orthodontics.
(5) How Guy's Children's Clinic, under Mr. Bull's directorship, fulfils the teaching need in orthodontics for practice in this country.
(6) A comparison with American teaching schools.

(7) The system of treatment in the Children's Department with reference to case recording and diagnosis.
(8) A consideration of recent departmental investigation into the problem of diagnosis.
(9) The responsibilities of those who work as dressers in the Children's Department.

(1) *The need for orthodontic treatment.*

As to the need for orthodontic treatment a few words will suffice; one has only to practise a little common observation upon those we see in trains and 'buses, or in places of communal work or play to see the penalties exacted by the neglect of this work; gingivitis and pyorrhœa due to crowding, caries due to food trap impaction, and every variety of profile deformity, in a girl lessening the chances of a successful marriage, in a boy diminishing his potential value as a wage-earner; one could multiply almost indefinitely the results of neglect in the rational treatment of dental irregularity. The following profile photographs (projected on the epidiascope) of two boys now under treatment in the department will show the deformity elements of superior protrusion and mandibular retrusion, both are quite intelligent lads, the second having just won an L.C.C. Trade Scholarship; yet, unless our treatment is successful, they must carry throughout life the stamp, false though it may be, of irresolution, indecision and weak will.

(2) *The value of orthodontic knowledge.*

On a strict analysis of the basic factors which make for success in dental practice, it is soon realised that one's reputation, apart from the all important personal factor, depends upon one's ability in (*a*) prosthetic work, (*b*) orthodontic work, (*c*) exodontic and surgical work, and (*d*) conservative work, in this order, and for a very obvious reason, namely this, that the lay person is in quite a fair position to judge and test the quality of prosthetic and orthodontic work by his own accepted standards of beauty and utility, while he is quite unable to come to any accurate conclusion about the essential merits of surgical and conservative work, as the standards by which they are judged must always remain essentially technical. To illustrate this point a hypothetical case can be cited though only too frequently such cases prove to be actual ones.

To your practice in Harley Street one day comes, let us say, Lady Nitwit, complaining of slight twinges of pain in the lower molar region. On clinical examination nothing is revealed, so you radiograph and discover, quite possibly, deep interstitial caries in a lower premolar.

You thereupon open up from the crown and cut a classical self cleansing cavity, filling with some permanent material; do not for one moment think that Lady Nitwit materially appreciates your ethical treatment, for in six months she would be quite unable to point out which tooth you had treated, while she will always retain her first impression that you were fussy and long-winded, and, as such, to be compared unfavourably with Mr. Lightfinger Caries who practises next door.

On the other hand, if you so make a denture for Lady Broadacres, which, in her opinion, takes ten years from her age, or if you so reduce her daughter's protruding incisor teeth, so that a marriage with one of our merchant princes is sucessfully arranged, she will, with great benefit to your bank account, accord you her sincerest respect and admiration.

(3) *Of the interest attaching to the practice of orthodontics.*

It has often been said by certain disgruntled persons that dentistry is a mixture of plumbing and carpentry; a criticism with a certain germ of truth in it if one considers the essential nature of prosthetic and conservative work. As far as orthodontic work is concerned, however, such criticisms are quite untenable, for you stand, as it were, at natures elbow, assisting when things go wrong, and watching the growing organism develop under your very eyes; your wisdom and experience will be constantly called upon, when to interfere, and—more important—when to hold your hand, and if you are worthy your results will be for all men to see.

Psychologically too, you will find children vitally interesting in the early years before the sausage machine of civilisation has impressed rigid standards of good or bad breeding on them all. Adults, like mass produced motor cars, are all much the same, it is the new year's model with its promise of perfection or possibility of failure which will always hold our interest.

(4) *Of the difficulties met with in orthodontics.*

You must remember that in any busy practice, other than a strictly industrial one, you will inevitably be called upon to undertake regulation treatment, but do not forget that things which do much good can also do much harm, and that orthodontic work is no exception to this rule, also that the layman will be as quick to perceive failure in this work, as he will be to appreciate success. There is no easy road to success, though the path is straighter if you can combine discretion and judgment with a mastery of simple mechanical technique, and even when your technique is perfect, cases will still go wrong, but with the passage of years such cases will steadily diminish in number as your experience increases, but if your technique is imperfect, you will merely

muddle along not knowing whether to blame your principles or your methods for your ever-recurring failures.

Yet even when your technique is perfect do not think that the practice of orthodontics in this country is by any means easy; at hospital you can, up to a point, select your material and keep it under complete control, and again, when you are a Harley Street specialist receiving adequate monetary recompense for every case you undertake, you also are able to exercise a fairly rigid supervision; but in middleclass and fashionable general practice you are up against all sorts and manner of difficulties. Under the peculiar educational system of this country, whereby it is alleged that Waterloo was won on the playing fields of Eton, you will find your little patients periodically packed off to preparatory and public schools all over the country from Peebles to Penzance, and that parents expect you to work miracles of regulation in the intervening periods; again, you will find that you have to break down all sorts of barriers of prejudice and ignorance on the part of parents, and, at the same time, strive your hardest to get their co-operation and good will.

(5) *How Guy's Children's Clinic meets the teaching need.*

If then, you are now clear in your own mind as to the possibilities of orthodontics, you may well ask what teaching facilities are available for you in the children's department for this work.

Your opportunity will come in your fourth year, when you should have, but sometimes have not, acquired a sound knowledge of the general principles of mechanical and operative dentistry; and in the three months allowed it is possible for all of you to learn the rudiments of management of little children and their mothers; to achieve a certain knowledge of the basic factors in diagnosis and treatment; to acquire a knowledge of the simpler forms of fixed apparatus and their applications, and to attain to a complete mastery of movable plate technique. If you are fortunate in combining the capacity for taking pains with some natural aptitude for the work you can learn very much more than this, for the material in the Children's Department will give you unlimited scope for your energies.

(6) *A comparison with American schools.*

You will often hear our work and methods compared most unfavourably with those of American schools, but any criticisms founded upon a direct comparison are by no means necessarily accurate, as we in this country have to face entirely different problems and to work under quite dissimilar conditions; and if your conception of the aim of orthodontics is (1) to improve the appearance, and (2) to create an efficient bite so that the tendency to caries and pyorrhœa is diminished, then you will find the English "System" of the utmost utility. It is my impression, speaking admittedly from the scantiest personal knowledge, that the American schools are essentially post-graduate in nature, and that they fit out men to practise amongst a wealthy clientele, educated to an appreciation of the services rendered, and who are willing and in a position to pay adequately for them.

In this country, under prevailing economic conditions, we have to practise amongst those quite unable to afford the luxury of elaborate, though admittedly efficient, schemes of mechanical treatment. Irrespective of actual results, which some even criticise, but which I am in no position to question, American systems could not possibly be utilised for the great mass of patients in this country, while all will agree that at its best, the English "System" is capable of doing much good.

(7) *The System of the Children's Department.*

Children of any age are accepted for orthodontic treatment, and every one is first seen by Mr. Bull at his weekly clinic; here diagnosis and the basic principles of treatment are discussed and noted on the patient's case sheet; record models of the deformity are studied, and then filed in special numbered boxes. After a short period the patient is brought up for active treatment and is first seen by the dresser to whom it is allotted and by the Registrar; at this first interview *the general plan and the mechanical details of treatment* are considered, and, if necessary, profile photographs taken for record; the dresser then, in the Registrar's presence, is made to give a little talk in simple language to the patient's parent, explaining the difficulties of the case, and how it is proposed to treat it.

The case is then commenced and if necessary carried on by successive dressers, record models are taken at intervals so that progress can be studied, all such models being stored under the patient's number in the Registrar's office; thus dressers in the Department have complete access to the progress records of cases other than their own.

(8) *The problem of diagnosis.*

In diagnosis we are trying to break free from the "habit" and "tonsil and" adenoid tradition, and to bring our specialised knowledge more into line with the general views held by the leading children's specialists. Dr. Hector Cameron, our own specialist in pediatrics, has done much pioneer work in elucidating the significance of the child's "diathesis," that is, its inherited predisposition to disease, and I am so fully convinced of the practical

application of his conclusions in relation to our own work, that I am bringing some cases illustrative of his views before you to-night. Quite briefly, Dr. Cameron suggests that children can be divided into three classes :—

(1) Those showing a tendency to lymph tissue proliferation.
(2) Normals.
(3) Those manifesting over-ready disturbances in metabolism usually in the form of an acidosis.

(1) *The lymphatic diathesis.*

The lymphatic state is manifested in—

(*a*) *Appearance* as a fat, flabby, usually fair, child ; the hair coarse in texture, almost " towy " in nature ; eyebrows and eyelashes rather short, a thick opaque skin, florid blown-out cheeks, depressed bridge to the nose, shallow eye sockets.

(*b*) *Mentality* as being dull, passive, lethargic, unresponsive, with slow reactions to environment.

(*c*) *Physical examination* shows over-weight, muscles in poor condition, much generalised flabby fat.

(*d*) *Clinical examination* shows the tissues to be hydro-labile, *i.e.*, watery body fluids tend to accumulate in the tissues, the excess appearing as an exudation ; there is a tendency to running eyes, the conjunctivitis of measles being often severe, running ears, with middle ear troubles after scarlet fever, running nose, manifested as snuffles. Cuts and scratches remain moist and tend to become infected. There is a great tendency to lymph-tissue proliferation accentuated by the state of low catarrhal infection ; thus, *enlarged tonsils and adenoids* are common, though these are only a local manifestation of a general state.

These children are hearty, almost gluttonous, eaters, and to the lay person appear to enjoy perfect health.

(2) *The acidotic diathesis* in this group, is seen in :—

(*a*) *Appearance* ; a thin, wiry, pale, usually dark child, hair crisp, eyelashes long and thick ; dark eyes, skin pale, almost transparent, eye sockets deep.

(*b*) *Mentality* ; the child is intelligent, quick, alert, eager, with quick reaction to environment.

(*c*) *Physical examination* shows normal or subnormal weight ; the muscles may be flabby and there may be postural defect ; this flabbiness is a result of the varying state of acidosis which may be present and is not due to excess of fat.

(*d*) *Clinical examination* shows that these children tend to an over-ready disturbance of carbohydrate metabolism (normally carbohydrate in the form of sugars, etc., forms a great source of energy, while fats can only be metabolised if sufficient carbohydrate is present).

These children, with their active emotional reactions, tend to burn up their sugar reserves rapidly so that the fats become insufficiently metabolised, intermediate toxic bodies (ketones) being formed which are acid in nature; the Ph reaction of the blood is altered towards the acid side, and the clinical symptoms of " acidosis " appear sometimes dramatically as cyclical vomiting, abdominal and joint pains, or more quietly as pallor, irritability and postural defect.

This condition is not infrequently accentuated by careful parents, who give much fat, such as butter and cream, to combat the slighter symptoms of pallor and lassitude, at the same time cutting down the carbohydrate intake in the form of sugars and sweets.

Now having digested these tables you might well ask to what extent is such matter relevant to a discussion on the problems in orthodontics ; it is to this extent departmental statistics are tending to show that *dental deformity in the lymphatic child is typically superior protrusion, with some element of mandibular retrusion, narrowed inter-canine space and close bite*, while dental deformity in the acidotic child typically consists of *local or general irregularity due to crowding, with jaws in normal relation and without excessive overbite.*

To my mind, this broad conception of ætiology has reduced the disorderly jig-saw puzzle picture of diagnosis into a well defined image ; the time is past when the blame for superior protrusion should be laid at the door of enlarged tonsils and adenoids, and in years to come it must inevitably be realised that the treatment of such a deformity will lie as much in the hands of the pediatric specialist as in those of the orthodontist ; intermittently acting pieces of vulcanite cannot cure an inherited predisposition to disease of which dental irregularity may be only a sympton ; while we can readily appreciate why the removal of tonsils and adenoids does not necessarily cure an incipient dental deformity, both being merely symptoms of a root cause which remains untreated.

So much then for our material, let us now consider the more practical mechanical elements of treatment.

(A series of twenty cases was then shown illustrating the value of the English " system," *i.e.*, simple movable and fixed appliances, sometimes combined with extraction ; as applied to the differing age periods ; these cases being representative of the standard practice of the orthodontic department of the Dental School.)

In conclusion there remains one point more, and that a message for all those who have yet to work with us in the Department. Remember that Guy's has a two hundred year-old tradition of

service, and that one maintained most largely by those who have been students here ; it is peculiar to Guy's that the routine work should rest so largely in the hands of the students themselves, who are thus in a position to acquire the maximum of practical experience ; this principle applies almost more to the working of the Children's Department than of any other. The Directorate alone can do little ; the bulk of the work must lie in your hands. Patients unable to afford the services of competent orthodontists come to us in perfect trust, and you must not betray it.

Every time you are late for an appointment, make faulty apparatus, or forget to take record models, you are letting down the patient, you are imperilling the reputation of your own hospital, and you are injuring yourself. At times things may go badly, patients may be difficult, parents ignorant, house officers peevish, registrars pedantic, but these are merely the obstacles which separate you from your opportunity, the extent and nature of which I have endeavoured to outline to you in the first part of our talk to-night.

Remember that worthwhile opportunities only come once, so when it comes seize it with both hands, you will not be the loser and your Children's Department will go from strength to strength.

Correspondence

Post-Graduate Teaching

To the Editor of the GAZETTE

SIR,—I read with interest the letter in your last issue from "Three Guy's Men of the Nineties." I feel that it may voice a general need and suggest to us at the hospital an essential duty towards those who have left it, namely, the institution of an annual "refresher course." I believe I am right in saying that two London Medical Schools already arrange for a yearly week-end gathering of this kind, at which, during Friday, Saturday and Sunday, lectures and demonstrations are given by the staff on various subjects likely to be of general interest. In the case of one Medical School the course follows immediately after the annual dinner. Perhaps, Sir, you would invite discussion of a plan such as this. Valuable as they are, the "Combined Rounds" take place at a time at which it is difficult for most men, and impossible for those in the country, to attend with any regularity. Furthermore, the subjects for discussion are limited by the nature of the cases available at the time.

Yours, etc., J. A. R.

(We hope that further correspondence on this subject will produce suggestions which will lead to the development of such a course as is proposed above.—ED.)

Team Diagnosis

To the Editor of the GAZETTE

SIR,—From personal association and on account of the admirable articles which appear from his pen, I have the greatest regard for Dr. Vaughan Pendred. Moreover, his very considerable experience and high qualifications entitle him to the greatest respect. But I confess I cannot understand from his letter, which is aimed as an indictment of team diagnosis, in what way the examples he appends are supposed to support his criticism.

He quotes a number of errors in diagnosis, all of which go to prove the fallibility of human judgment, a truism which surely demands no assertion. In his first example, thirty surgeons, candidates for the Fellowship, were unanimous in a diagnosis of sarcoma. We have the right to assume that such candidates had high surgical attainments ; furthermore they had the additional advantage of that mental exaltation which is accredited to examiners ; and a legitimate conclusion to make is that the proper diagnosis in the circumstances *was* that of sarcoma, a conclusion which is not invalidated by this diagnosis actually being incorrect.

His other examples are instances of incorrect diagnoses by specialists in their special department, *e.g.*, laryngologists, pathologists, surgeons, consulting physicians, neurologists, with a terminating example when the patient benefited—it is implied—because no consultant was called in.

Are we to conclude that because pathologists are not always accurate, and surgeons sometimes wrong, and physicians on occasion in error, therefore, pathologists, surgeons, physicians *et hoc genus omne* are of no use at all and, in fact, a menace ?

And in any case what has this to do with "Team Diagnosis" ?

Admittedly, the modern student, a victim of the appallingly overburdened curriculum, loses all sense of values and thinks in terms of test meals and radiography when he ought to have looked at the teeth or spent a few minutes investigating the social, hygienic and economic circumstances of the patient. And therein may lie the seed of the abuse of team diagnosis, which becomes reprobated as an unnecessary substitute for a superficial examination of any simple condition.

Team diagnosis has its indication, but as Dr. Vaughan Pendred has not really applied himself to the subject at all I hardly feel justified in further encroaching upon the hospitality of your columns to break a lance in its advance.

Yours, etc.,

ADOLPHE ABRAHAMS.

86, Brook Street, Grosvenor Square, W.1.

Radium

To the Editor of the GAZETTE

SIR,—In the issue of *Guy's Hospital Gazette*, dated July 13th, 1929, in a reference to radium, it is stated, "Guy's may not be in the position of a pioneer in the use of this new ally in the war against malignant disease." This question has been dealt with indirectly in part in a clinical lecture published in the *Gazette* of October, 1929, but now that a new supply of radium has actually arrived at Guy's it may be of interest to go into the matter more fully.

In 1908 22½ milligrammes of radium were purchased by the Hospital on my recommendation after I had spent some time in Paris in seeing administered what was then an entirely new factor in medical treatment.

In 1909, in the issue of January 23rd, the *Gazette* again referred to the question in "Passim" in the following terms, "In connection with the Light Department readers of the *Gazette* may remember a short article . . . . in the issue of November 28th concerning the use of Radium upstairs. . . . . The specimen of radium referred to . . . . has now been in use for four months and the results of it in malignant disease have been very encouraging thus confirming what was reported then. Of course, it is early to talk of 'cures' in so short a time, but, in several cases, malignant glands and tumours appear to have entirely disappeared, and in other cases large nævi are clearing up. Of special interest are three inoperable cases of recurrence after removal of carcinomata of the cervix uteri which are improving greatly under treatment by radium; these cases are, of course, still in attendance.

"We understand that the price of radium since our present piece was bought, at the cost of several hundred pounds, has gone up already, so that we at Guy's have been fortunate in obtaining what is the finest specimen in any London Hospital."

Further, on page 251 of the *Gazette* for 1909, the following passage occurs, "There is a widespread belief that a great future lies before the actino-therapeutic method of treating malignant growths . . . . the surgeon realises that in the radium or X-ray treatment lies his most valuable ally . . . . . We are happy to state that Guy's has once more shown itself to be in the vanguard of medical progress by the establishment of a Medical Research Studentship for the original investigation in connection with actino-therapeutics with special reference to cancer."

A few years ago the grandson of Dr. James Douglas came to see me, and for the first time, although I knew him well, I heard Dr. Douglas' history. At the age of 40 he was a Professor of Chemistry in Canada, when his father, who had been a student at Guy's, died leaving debts for which Dr. Douglas considered he was morally responsible. He, therefore, entered the business world and ultimately became wealthy for, besides being elected Vice-Chancellor of the McGill University, to which he gave £200,000, he also subscribed large sums to other charities too numerous to mention here. He had, therefore, gained administrative knowledge before his visit to England although, on this occasion, he brought a doctor over with him in order to confirm his judgment in clinical questions.

He had found that radium treatment, as carried out in America, was unsatisfactory, so he came to Guy's to see the work which was being done there. He then went to Paris, but returned to Guy's because, in his opinion, cases of malignant disease were being treated there more satisfactorily than elsewhere.

Dr. Douglas was anxious to facilitate the cure of cancer by radium in every possible way, and I drew up a scheme in which Dr. A. F. Hurst was to act as physician, Mr. E. C. Hughes as surgeon, Mr. Wilson, who was recommended by Sir Ernest Rutherford, the greatest living authority on radium, as radium expert and myself. You will see that the clinical aspect predominated in this scheme which received Dr. Douglas' approval. It was not adopted, however, and one in which investigation was carried out solely by experiments on animals was substituted. This work, done by Dr. E. Bellingham Smith, was the best of its special kind published at the time, but, although it has not been surpassed, it has had but little influence on the clinical use of radium.

Dr. Douglas intended to give further facilities for radium research at Guy's, but negotiations proved difficult and he returned to New York in spite of his previous experience. This caused delay in the research and it was not until 1917 that the first report of "Radium Therapy in Cancer" was issued from the Memorial Hospital in New York which was practically devoted to research in malignant disease. In this Dr. Douglas was the prime mover. The amount of radium in use then was 2.8 grammes and this was increased by 1 gramme in every 10 months. The total sum spent by Dr. Douglas can hardly have been less than half a million pounds.

I may add that the scheme adopted by the Memorial Hospital was practically the same as the one which was originally drafted at Guy's, and it was a great disappointment to Dr. Douglas that the money could not be utilised at Guy's as a memorial to his father.

To resume, the *Gazette* issued on July 13th, 1929, after dealing with the subject of radium, continues as follows: "We have at least the advantage of long familarity with a very similar weapon—the X-ray of short wave length." That is quite true, but I think the remark may be understood by many of your readers to refer to the work done in the Deep X-ray Therapy Department during the past five years. As a matter of fact, the use of the short X-ray length at the hospital dates from 1908, and this method of treatment was well established when Dr. James Douglas came to England.

It was common knowledge at that time, and he made no secret about it, that the real reason for his visit to England was for the treatment of a relative. I feel sure, therefore, he would have no objection to me referring to that treatment, and also to the fact that not only was radium administered to the patient (the quantity being 80 m.mg.), but she was also treated by means of X-rays through a sheet of lead—in other words the X-rays of short wave length to which allusion has been made. Dr. Douglas was much interested in this new method of using X-rays, and it was with his full knowledge and approval that what was looked on at the time as rather a dangerous experiment was used on his relative. This treatment has been carried out continuously from that date in this hospital in cases of malignant disease down to the present time. I believe that the first record of X-ray being used in this manner was the record of cases published from Erlanger in 1913—*i.e.*, five years later.

The statement about long familiarity with the X-ray of short wave length is thus strictly accurate, and it is also correct that "it is just conceivable that the two agents (radium and short X-rays) may be used in conjunction in the treatment of the susceptible squamous-celled tumour and its secondary deposits." What also may be worthy of note is the fact that the suggestion here made as new was the recognised practice at Guy's more than 20 years ago as is proved by the treatment of Dr. Douglas' relative.

In the *Lancet*, of July 17th, 1909, an article on the treatment of malignant disease was published in which 31 consecutive cases treated at Guy's Hospital were described in detail. Unfortunately, probably owing to lack of interest in the subject, the Editor was unable to publish the cases in full as had been hoped, but he published a record in tabulated form together with some comments on them. This paper is referred to in the *Medical Annual* for 1910, page 127: "The case for X-ray treatment of malignant disease is very fairly stated in a paper . . . . and after describing some cases more or less in detail, he concludes (1) In superficial forms of malignant disease X-rays may temporarily arrest the course of the disease, relieve the pain, diminish the discharge and heal up ulcers. (2) Probably X-rays prevent the occurrence of superficial secondary deposits. (3) Embryonic cells are more easily destroyed by X-rays than are normal cells. This we may say very accurately summarises our own experience in the treatment of a very large number of cases in the Electrical Department of the London Hospital, and, as our own experience now extends over six years, we are inclined to question the accuracy of observation of those who claim results markedly superior to those put forward . . . . ."

It is difficult for those who have seen X-ray work carried out with modern plant, where it is only necessary to turn on a switch when X-rays are given off without variation and without any attention being necessary, to understand the difficulties with which those who gave X-ray treatment 20 years ago had to contend. Radiologists who have used X-ray plants during the last few years are unanimous in saying that the older plants were practically useless. Doubtless there is some truth in this, but it would be interesting to see how the conclusions drawn from a modern series of consecutive cases compare with the above.

Other means of combating malignant disease have always been used at Guy's. One instance of great interest which occurred in 1910 and concerns diathermy is described in the *Gazette*, dated December 10th, 1910. In a clinical lecture, in which the patient was shown, the *Gazette* states: "The patient, who is 50 years of age, was admitted into hospital under Mr. Lane's care in April, 1910, suffering from growth of the upper jaw. Microscopical examination showed it to be a carcinoma. He was operated on by Mr. Lane who removed the upper jaw, orbital plate and base of the sphenoid . . . . . the operation area was then treated for five minutes with high frequency current . . . . . The whole of the surface was healed up. He is now being treated with X-rays and radium, as in so severe a case of cancer recurrence is most probable." This combination of treatments would probably be the best method of dealing with a similar growth to-day, but the case described above is especially noteworthy as it is the first time in which diathermy was so used in England. An erroneous claim (unpublished) has been put forward in London that the first case treated with diathermy was by Dr. Nagelschmidt in July, 1910.

The first case ever shown at the Royal Society of Medicine of this form of treatment was in and came from Guy's, and is noted in *Proc. Roy. Soc. Med. Lond.*, Clinical Section, 1911 and 1912,

page 96, where two rodent ulcers treated by Mr. Philip Turner are described thus: "When the ulcers had been thoroughly scraped the raw surface was cauterised by the use of the H.F. current (diathermy)."

Moreover, the first diathermy machine ever made in England was made at Guy's by Mr. J. P. Pullin. This was an engineering feat of peculiar difficulty especially considering the limited engineering facilities of the Electrical Department. As far as I know, this feat has never been accomplished since in any hospital either in London or elsewhere.

Much more might be said on the subject, but space forbids.

Yours, etc.,

C. E. IREDELL.

Student Christian Movement

ANY who were interested at the time in the details of the expedition to climb Mount Everest three or four years ago may remember the name of the M.O. to the expedition. They probably will not know, however, that Mr. Somervell (M.A., M.B. Cantab., F.R.C.S. Eng.), as a result of what he saw in India decided to work there rather than in London at University College Hospital, and that he is now in charge of a hospital (150 beds) in Travancore with 15 small branch hospitals in the country round. He is, at the moment, in England, and has very kindly consented to come to Guy's to tell us about the condition of affairs, medical and surgical, in his part of India, and incidentally, the two things being bound together, why he decided to stay out there.

The writer has seen Mr. Somervell on one or two occasions, and has gathered from conversation that the scope of the work is tremendous. He would mention here two odd facts which stuck in his mind simply because they do give a vivid idea of the surgical needs. The first is that Mr. Somervell is at the moment collecting for radium. This because, to mention one part of the body only, every adult over 40 has leukoplakia of the cheek from betel-nut chewing and the incidence of oral epithelioma is accordingly extremely high. The second is the memory of hearing Mr. Somervell say that he always drew the line at doing more than four gastro-jejunostomies in a morning. The work is by no means exclusively surgical however. Anything up to stamping out a cholera epidemic may be required.

Only the professional aspects of Mr. Somervell's work have been touched on here, but the details of the wider ministry of a missionary hospital will be left to him to speak about himself.

The meeting is to be at 4.40 p.m. in the Medical School Committee Room on Friday, February 14th. Mr. Ogilvie will be in the chair. All Guy's men are invited. There will be time given for questions and discussion. The Committee Room is at the extreme end of the Medical School Office passage.

The ordinary meetings of the Guy's Hospital Branch of the Student Christian Movement are being held this term from 4.45 to 5.45 p.m. on Fridays, and from 1.25 p.m. to 1.55 p.m. on Thursday (devotional). Place: The Chaplain's room. The door is at the end of a short passage immediately on the left on entering the middle door on the right-hand side of the quadrangle as one enters the hospital. All further particulars can be obtained from C. L. Hudson (Dental School), G. Wilson or P. G. Jones (Medical School), or J. Sharp or F. H. Stevenson (Wards).

Reviews

Heredity in Man. By Professor RUGGLES GATES, Ph.D., LL.D., King's College. Published by Messrs. Constable & Co. *Price* 24*s.*

BOTH anthropologists and medical men are deeply indebted to Professor Gates for undertaking the immense labour of bringing up-to-date and amplifying his earlier extract of the vast and often ill-codified literature of human inheritance. The author commends the increased care which acquaintance with Mendelian segregation has introduced into the practice of recording human heredity, but bewails the fact that many writers still fail to trace all the normals as well as the abnormals among the descendants, ascendants and relatives of the affected person. A complete key to his own system of recording would have been a welcome appendage to the introduction. The proof has been fairly closely read, but all Mammals are given Primate rank on page 21, and the thyroxin molecule contains arsenic on page 307. As Professor Gates has long been an important investigator in the field of genetics, his book may be taken as an index of the present position of the science, and cannot fail to impress its readers with the complexity of the apologetic required to square the troublesome arithmetic of genetic

results. Multiple factors, multiple allelomorphs, crossing over, modifying factors, intensifying factors, partial and variable dominance, etc., are, singly or in alternative pairs, called into action when the figures do not turn up according to plan. Weismannism collapsed under the armour of secondary postulates, just as these were on the point of rendering it invulnerable. But genetics are still young, and the medical profession needs reminding that its opportunity of adding to the statistical material is far greater than its performance.

Sleep and the Treatment of its Disorders. By R. D. GILLESPIE, M.D., M.R.C.P., D.P.M. Published by Messrs. Baillière, Tindall & Cox. *Price* 7*s.* 6*d.*

THIS excellent monograph we believe to have originated from a clinical lecture given by Dr. Gillespie some years ago at the request of a final-year student much perturbed by the possibility of a question on the treatment of insomnia. The lecture in question was published in the *Guy's Hospital Gazette* of November, 1927, and at that time appeared to be an extremely full discussion of sleep, but further expansion and elaboration has produced an even more interesting account of the subject, together with an extensive list of references to the appropriate literature.

The question of sleep seems to have been referred by the physiologist to the psychologist with a great deal of relief, and the suggestion that some help in the elucidation of the problem might possibly be obtained from consideration of experiments with the so-called "conditioned" reflexes. Fortunately for the psychologist the work of Pavlov and his associates has provided the basis for a much more feasible conception of the nature of sleep than hitherto existed. The full significance of this recent development has been carefully developed by Dr. Gillespie in the theoretical side of his treatise.

The question of the treatment of sleep disorders has been dealt with in a very thorough manner indeed, and the use of physiotherapy given full prominence, together with an extensive consideration of the question of hypnotic drugs. Thus, the volume is as practically helpful as it is theoretically interesting, and should find a respected place on any physician's bookshelf.

Essentials of Physiology (Bainbridge and Menzies). Edited and Revised by H. HARTRIDGE, M.A., M.D., Sc.D., F.R.S. 6th Edition. Published by Messrs. Longmans, Green & Co. *Price* 14*s.*

FOR many years this book has held an unrivalled position as an elementary treatise for the junior student and frequently proved equally useful in last-minute revision prior to examinations. The new edition, revised by Professor Hartridge, is even better adapted than the previous version to those important purposes of groundwork and revision. A certain weakness in the parts dealing with the Central Nervous System has been swept away, and the re-written account of this system now forms one of the most valuable sections of the entire volume. The diagrams which have been added to this part of the book might, however, prove somewhat difficult of interpretation by the inexperienced reader. Respiration and the Special Senses are dealt with in an excellent manner, and the newer views on certain aspects of digestion are now included.

Frequent misprints mar some of the new sections, *e.g.*, cranial for crural, page 289, animo for amino, page 411. Dr. Hurst's name is given as Hertz on pages 365 and 392, Professor Pembrey's name as Pembery on page 137, and Professor Cushny's name as Cushney on page 467; these minor errors might receive attention in a subsequent edition.

The price of the book is considerable for what is admittedly an elementary work, but, in our opinion, not excessive, and there is no doubt that the previous popularity will be easily maintained.

Acute Infectious Diseases. By J. D. ROLLESTON, M.A., M.D. (Oxon.), M.R.C.P. (Lond.), F.S.A. 2nd Edition. Pp. 419. Published by Messrs. William Heinemann, Ltd. *Price* 15*s.*

SINCE the appearance of this book in its first edition five years ago, there has, naturally enough, been no change in the standard teaching on this subject, but there have been a few advances of knowledge in the bacteriology of infectious fevers. The Schick test and immunisation against diphtheria are dealt with at some length, a short account of the Dick test and the writer's experience in its use is also given. Reference is briefly made to encephalitis following vaccination, and to the resulting controversy raging around the subject of vaccination; this question, however, is too recent for a full discussion of it to appear in this book.

Throughout, the account given of the various infectious diseases is clear and makes pleasant reading; the chapters on diphtheria and Vincent's angina are particularly interesting. Further, the book is well produced in accordance with Heinemann's usual custom; it should prove very useful to all those who desire a book that is at once up-to-date, and whose chapters are not so compact in their statements as those of the usual text-books of medicine, so that these may be the more easily appreciated at their full value.

Radium and its Surgical Applications. By H. S. Souttar, D.M., M.Ch., F.R.C.S. Published by Messrs. William Heinemann, Ltd. *Price 7s. 6d.*

THIS little book opens with an interesting account, "in the simplest form," of the physical properties of radium, and of its relationship to other members of the same chemical family. The several types of rays emanating from radium are clearly differentiated and their properties mentioned.

The different methods of application are all briefly described, together with the indication for each, and both the theory and practice of screening are discussed.

The remainder of the book indicates the technique which has been found most suitable in treating lesions in different parts of the body, together with an account of the results of treatment and notes on illustrative cases.

Good results are claimed in the case of squamous-celled carcinomata especially in the basal celled variety. The action on columnar-celled carcinomata, however, has not been so satisfactory as yet, whilst in the case of sarcomata the results have been variable.

This book should certainly be read by all surgical pessimists as well as by those who desire an elementary knowledge concerning the action and use of radium.

Landmarks and Surface Markings of the Human Body. By L. Bathe Rawlings, F.R.C.S. Published by Messrs. H. K. Lewis & Co. *Price 7s. 6d.*

THE wealth of terse and accurate information and of exact illustrations in this book has recommended it for many years to those in the dissecting room, and to those, who in the few, last, hectic days before the *viva voce* in surgery require a brief review of this subject. The new edition has been improved by several new plates, and is a book which should be found on the shelf of every surgically-minded student.

Sport

Rugby

Guy's v. Gloucester

AT Honor Oak Park on Saturday, January 25th, Gloucester gained a decisive victory over Guy's by a placed goal, two penalty goals and a try (14 points) to nil.

The ground was very heavy and muddy in places, but this did not deter the West-countrymen whose fine pack simply revelled in the conditions.

For the first time for some weeks the Guy's forwards found their masters in the Gloucester eight who showed up to advantage in the scrums and particularly in the loose. Their following up was very smart and they never slackened for a moment from start to finish.

Boughton was in excellent form at full-back for the visitors and never put a foot wrong. His fielding and finding of touch were very good, and the three opportunities that came his way to score goals all proved successful.

Guy's who were without their captain, T. G. Robinson, kicked off, but the visitors' forwards attacked immediately and dribbled to our 25. After two or three scrums dangerously near our line, Guy's were penalised and Boughton had no difficulty in scoring.

Soon after the re-start, the Gloucester three's participated in several rounds of passing before McCanlis broke through with Baker, and the latter was only thrown into touch near the corner flag.

After Howell had cleverly stopped Saby, he broke away on the blind side of the scrum and made plenty of ground before he was eventually tackled. Clever play by Windsor Lewis carried the ball into the visitors' 25, but Morgan slipped when accepting the final pass and a good opening went begging. Gloucester retaliated with another bout of passing to our 25, when the ball was punted over our goal line and appeared to be going harmlessly out of play, when Crichton-Miller dashed up and secured the touch down for Boughton to add the extra points.

After this reverse, Guy's woke up and several excellent rounds of passing looked very promising, but the visitors' tackling was sound and sure.

On one occasion Giesen made a fine run through the centre, but his pass to Lashmore was intercepted and Gloucester relieved. This was followed by a good effort by Windsor Lewis and Guy Morgan, but Ryan was unable to hold the latter's swift pass.

Just before the interval Gloucester were awarded another penalty and Boughton successfully negotiated the kick.

Guy's showed up much better in the second half, but although numerous attacks were initiated very little progress was made against a solid defence. In the first few minutes a dangerous forward rush by the visitors compelled Wailer to kick over the line, but this was followed by a great round of passing by Lewis, Guy Morgan, Giesen and

Johnson. A hot attack was kept up in Gloucester's 25, but eventually Boughton drove Guy's back. Wailer missed the ball and Gloucester looked certain to score, but Ryan made a wonderful clearance on the line.

Following a splendid dribble by K. P. Smith, Windsor Lewis created a nice opening for Guy Morgan, and the latter sent Johnson away on the wing, but Lovegrove made a fine recovery and tackled Johnson just in time.

Again Guy's pressed through the Giesen-Morgan-Lewis combination, and a clever kick by Ryan found touch in the corner.

After a temporary set-back, Morgan, in his own half, cleverly dodged several opponents and sent Johnson away on the wing. The latter made an electrifying dash which covered half the length of the field, and actually got the better of Boughton, but James got back in time and saved in his 25.

A great individual effort to break through by Guy Morgan was only stopped in Gloucester's 25, when he was overpowered by numbers. Unfortunately, he was injured in the tackle and took no further part in the game.

Near the end, Gloucester's forwards again dashed down the field, and although Wailer checked them temporarily, the ball was kicked across to James who was unmarked and had no difficulty in scoring an unconverted try.

Team—L. Wailer; D. F. Ryan; J. E. Giesen, W. Guy Morgan, A. G. Johnson; Windsor H. Lewis, J. Howell; J. R. F. Popplewell, C. D. Malone, R. A. P. Hogbin, G. F. Lashmore, T. Morgan, J. S. Batchelor, J. Kunovsky, K. P. Smith.

Guy's v. Middlesex
1st Round Hospital Cup

ON Tuesday, February 4th, at the Athletic Ground, Richmond, Guy's were successful by the huge score of five goals and seven tries (46 points) to nil.

Robinson was still unable to take his place in the team, but Ryan proved a capable deputy.

For the first quarter of an hour Middlesex put up a capital fight, and it looked as though Guy's would have to go all-out to secure the verdict, but after continual pressure, Giesen gave a perfect pass to Ryan and the latter touched down near the posts, but Wailer missed an easy chance to convert.

The Hospital backs played at the top of their form throughout, and it would be difficult to single out any member for individual honours. Suffice it to say that if the form produced in this match is maintained there should be no worry for the future.

The combination and passing was extraordinarily accurate, and the manner in which some of the backs accepted difficult passes was very praiseworthy.

After Ryan had scored, Giesen, Howell (2), Malone and T. Morgan all crossed the line, two of the tries being converted, one by Wailer and the other by Hogbin. All the tries, with the exception of Howell's second try, which was the result of an individual effort direct from a scrummage, came as a result of some exceedingly good passing and handling by the backs.

In the second half, Guy's maintained the terrific pace set in the first period, and had Middlesex continually in a tangle. It was, therefore, not surprising to find the Middlesex men tiring under the pressure, and eventually further tries were scored by Giesen (2), Johnson, Windsor Lewis and Guy Morgan.

The try scored by Morgan was particularly amusing as he had already crossed the line and finding his way barred from touching down near the posts, had to run back into the field of play, dodging several opponents, before touching down immediately between the posts. Hogbin was successful with three of the kicks at goal, and Guy's entered the second round by the score as stated.

Team—L. Wailer; D. F. Ryan, J. E. Giesen, W. Guy Morgan, A. G. Johnson; Windsor H. Lewis, J. Howell; J. R. F. Popplewell, C. D. Malone, R. A. P. Hogbin, G. F. Lashmore, T. Morgan, J. S. Batchelor, K. P. Smith, J. Kunovsky.

Association

Guy's v. Clare College, Cambridge

CLARE COLLEGE (Cambridge) were the visitors to Honor Oak Park on Saturday, February 1st. The ground was in a terrible condition, but, nevertheless, a surprisingly good game resulted.

Clare were the first to attack, but they found the Guy's backs difficult to beat and play was quickly transferred to the opposite end. After about ten minutes play, the visitors' goalkeeper punched out a centre from Small, and in attempting to clear the left back accidently put through his own goal. A few minutes later Stubbs scored a second goal for Guy's with a hard shot from well out. Following several unproductive attacks by Clare, some clever passing between Cantor and Fitzgerald enabled Cantor to score a third goal.

In the second half the opposing forwards tried hard to reduce Guy's lead, but were only able to score once, being somewhat unlucky on one or two

occasions. During this half further goals were scored by Cantor, Small and Jones (2), Guy's thus winning by 7—1.

Being more accustomed to a muddy ground, Guy's adapted themselves much better than their opponents to the difficult conditions and fully deserved the large margin in their favour.

Team—E. Evans; D. B. Smallshaw, G. B. Brummitt; B. Holden, E. G. Stubbs, J. B. Blaikley; G. Fitzgerald, A. M. Cantor, I. O. Jones, I. A. Cathie, J. W. Small.

Hockey

Guy's v. R.N.C. Chatham

GUY'S had been beaten 0–5 by the R.N.C. in September, and the marked improvement in the side since then was demonstrated by a 7—3 win on the second occasion.

Guy's fielded their team for the Inter-Hospital Cup, and it was pleasing to note that the side played together as a unit, and individual efforts were less in evidence. If success is to be ours in the Cup-ties it will depend on such co-operation.

The scoring was opened by Guy's who scored three goals without reply, through R. V. Payne, E. T. Conybeare and H. O. Lyne. The Navy rallied to this start and before half-time had netted twice.

In the second half Guy's played a much superior game to that of their opponents and scored four more goals, through H. O. Lyne (2), R. V. Payne and R. A. Sykes. The Navy were outclassed in every department, and were only able to score once.

In view of the approaching Cup-ties this return to form of Guy's was stimulating.

Team—J. B. Schofield; G. N. Carrell, F. R. Hayward; T. F. Todd, R. A. Sykes, T. E. Mitchell; R. O. F. Tilleke, R. V. Payne, H. O. Lyne (Capt.), E. T. Conybeare, C. A. Clarke.

Guy's v. Lincoln College, Oxford

GUY'S visited Oxford on Saturday, January 25th. E. T. Conybeare and G. N. Carrell were unable to make the journey, but otherwise Guy's was well represented.

Guy's were much the better side and won decisively by 10 goals to 3. The scoring was opened by H. O. Lyne and R. O. F. Tilleke soon added a second. H. O. Lyne obtained a third goal before Lincoln scored. Guy's led 4—1 at half-time, the fourth goal being scored by L. N. Trethowan.

Lincoln College improved considerably in the second half and scored twice, but Guy's added six more to their total, the goals being scored by R. O. F. Tilleke (3), R. V. Payne, R. A. Sykes and L. N. Trethowan.

The game was a field-day for R. O. F. Tilleke who, whilst playing excellently at outside-left, came in to score four goals himself. R. A. Sykes at centre-half played his usual excellent game, but both outside halves were off form. At left back S. N. Tinkler put up a good game. H. O. Lyne and T. E. Mitchell were both badly hit on the knee in the first half and were partly incapacitated.

Team—J. B. Schofield; S. N. Tinkler, F. R. Hayward; T. F. Todd, R. A. Sykes, T. E. Mitchell; R. O. F. Tilleke, R. V. Payne, H. O. Lyne (Capt.), L. N. Trethowan, C. A. Clarke.

Guy's v. Royal Dental & Charing Cross Hospitals

(1st Round Inter-Hospital Cup)

GUY'S played the Royal Dental Hospital at Ealing on Wednesday, January 29th. The ground was extremely heavy, and in consequence the quality of the hockey was poor. Nevertheless, the game was played in a vigorous manner worthy of a Hospitals' Cup-tie.

Guy's opened the scoring through R. O. F. Tilleke, and immediately after E. T. Conybeare obtained another goal. For the remainder of the first half Guy's were defending while the Royal Dental equalised 2—2. Just before half-time Guy's obtained a third goal through C. A. Clarke.

Early in the second half Guy's established their superiority, H. O. Lyne scoring almost immediately. The fifth and final goal was obtained by H. O. Lyne from a penalty corner. During this half the Royal Dental were unable to score, the defence of the Guy's backs, G. N. Carrell and F. R. Hayward, being excellent.

On account of the heaviness of the ground very little good stickwork was seen. The game was marred by the many occasions on which "sticks" were given against Guy's.

For Guy's R. A. Sykes was prominent in attack, his persistence under such circumstances being especially effective. R. O. F. Tilleke made several excellent solo runs down the left wing and J. B. Schofield cleared well from goal.

The final score was Guy's 5 goals, Royal Dental 2 goals.

Our thanks are due to our few supporters, and in particular to Dr. and Mrs. Poulton for their encouragement.

Team—J. B. Schofield; G. N. Carrell, F. R. Hayward; T. F. Todd, R. A. Sykes, T. E. Mitchell; R. O. F. Tilleke, R. V. Payne, H. O. Lyne (Capt.), E. T. Conybeare, C. A. Clarke.

Fencing

AT the Fortnightly Handicap Medal Meeting of the University of London Fencing Club the Hospital gained first place in both weapons.

Foil.—E. L. Monkhouse (Scratch).

Sabre.—A. W. Holman (+3).

The date of the Inter-Hospital Fencing Cup has been fixed for Feb. 8th. It will take place at The London Fencing Club.

Hospital Information, etc.

Albert Kahn Travelling Fellowships

THE following details of the valuable Albert Kahn Travelling Fellowships have been brought to our notice, and may prove of interest to others. The Trustees of the above-named Foundation yearly elect one or more persons as Fellows.

The essential object of the Foundation is to enable persons of proved intellectual attainments to enjoy a year's travel round the world, free from all professional pursuits, with a view to an unprejudiced survey of various civilisations, a comparison of other human values with those already known, and the acquisition of a more generous and philosophic outlook on human life. *In no sense is it the intention of the Founder to further any special line of individual or academical research.*

No age limit is imposed, but persons between the ages of twenty-five and thirty-five are preferred.

The value of each Fellowship was originally £660 ; but since 1920 it has each year been raised, in order to meet the existing economic conditions, to £1,000.

Candidates must be British subjects, graduates of, or persons who have passed the Examinations required for a Degree in, some University in Great Britain or Ireland.

Nominations are in the hands of the Vice-Chancellors of the Universities of Great Britain and Ireland, the President of the Royal Society, and the President of the British Academy, each of whom may nominate only one candidate each year.

Guy's men desiring to be nominated should communicate with the Dean, Guy's Hospital Medical School, London Bridge, S.E.1, not later than February 21st, 1930

Change of Address

R. B. P. Lansdown, 100, Woodcote Grove Road, Coulsdon, Surrey. Tel. (unchanged) Purley 827.

W. H. M. Smith, "Sannox," 231, Selhurst Road, S.E.25.

Lionel Nurick, L.D.S., 47, High Street, Aylesbury.

W. E. Robinson, 63, Grosvenor Street, W.1. Tel. unchanged.

C. S. Hallpike, M.B., B.S., M.R.C.P., 15, Upper Wimpole Street, W.1.

Harold Chapman, 6, Upper Wimpole Street, W.1. Tel. Welbeck 1202.

Papers by Guy's Men

C. Worster Drought, M.D. Some Recent Advance in the Diagnosis and Treatment of Diseases of the Nervous System, *Clin. Jour.*, 1930, lix, 37.

—— Encephalitis Periaxialis Diffusa of Schilder, *Proc. Roy. Soc. Med.*, 1930, xxiii, 256 ; *Sec. Study Dis. Childr*, 14.

G. B. Dowling, M.D. Pityriasis Lichenoides et Varioliformis Acuta, *Ibid.*, 352, *Sect. Dermat*, 8.

H. W. Barber, M.B. (1) Unusual Form of Sarcoid ; (?) Case for Diagnosis ; (2) (?) Lupus Erythematosus of the Buccal Mucous Membrane ; (3) Extensive Lichen Planus with Involvement of the Mucous Membranes in a Young Child, *Ibid.*, 353–354 ; *Ibid.*, 9, 10.

G. B. Dowling, M.D. Norwegian Scabies, *Ibid.*, 355 ; *Ibid.*, 11.

Sir Wm. Hale-White, K.B.E., M.D. The Medical Boswells, *Ibid.*, 281, *Sect. Hist. Medicine*, 31.

R. J. Cann (for Mr. W. M. Mollison). Laryngo-Scleroma ; (?) Case for Diagnosis, *Ibid.*, 379, *Sect. Laryngol*, 11.

W. M. Mollison, M.Ch. President's Address ; A Brief Survey of the History of the Mastoid Operation, *Ibid.*, 381, *Sect. Otology*, 1.

W. A. Mill, F.R.C.S. Three Cases of Conservative Mastoid Operation with Temporal Muscle Graft, *Ibid.*, 401 ; *Ibid.*, 21.

R. P. Rowlands, M.S., F.R.C.S. Cholecystitis and Gall-Stones, *Brit. Med. Jour.*, 1930, i, 184.

C. Worster-Drought, M.D. Advances in Diagnosis and Treatment of Diseases of the Nervous System, *Ibid.*, 186.

A. H. Douthwaite, M.D., F.R.C.P. Some Diseases of the Motorist, *Ibid.*, 195.

Birth

SPURRELL—On January 27th, 1930, to Dorothy (née Griffith) the wife of W. R. Spurrell, of Applegarth, Boston Spa, Yorks—a daughter, Joan.

EDS. {J. B. B. P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *22nd February* 1930 *Number* 1085

PASSIM

THE round of Christmas activities has finally closed; the Residents' Play is of the past. On four nights of last week a noble throng gathered in the Physiological Theatre to see "The Magic Siren" or "Rep. Mist.," an account of which is found elsewhere. Here we would venture just to hope that the Residents' Play will continue as a hardy popular annual for ever and anon, in spite of the numerous difficulties attendant upon its production.

It seems to us that it is highly creditable that year by year fresh talent comes to light, so that the play is always produced and yet is never a failure. In spite of the increasing burden of an ever longer medical curriculum, Residents are, evidently, not such rabid specialists in their own job that they are incapable of further outlet for their energies, as instanced here.

IT will be with more than ordinary pleasure that Guy's men learn of the most recent honour to the late Professor Adrian Stokes. In recognition of his fine work with the Rockfeller Yellow Fever Commission at Lagos in 1928, the Ministry for the Colonies of the French Republic has made a posthumous award of the "Médaille d'Honneur des Epidémies" in gold. The medal, with its accompanying statement of award, will be on view in the Wills Library for the next few weeks.

WE offer our hearty congratulations to Mr. J. J. Chamberlain on his success in the annual competition held by the British Medical Association for Essays by Final-Year Students and Newly Qualified Practitioners (London Area, Group I). By winning the Prize this year with his essay entitled "Three Cases Illustrative of the Value of Ante-Natal Observation of Pregnant Women," Mr. Chamberlain becomes the third successive winner from Guy's.

THE Residents' Play was followed last Saturday by, not reaction, but the "Going-off" Dinner, on this occasion eaten with more than usual by way of musical entertainment; for not only were performances given of all the songs of the previous four nights, but also of one or two from "This Year of Greys," the play of a year ago. It is steadily becoming evident that "The Gentleman from Guy's" is gradually superseding "Guy's Patients Never Die" as the song to be sung on all occasions.

Mr. J. B. Blaikley was elected President of the Residents, and Mr. R. Glanvill Vice-President.

WE learn from the Secretaries of the Physical Society that as yet no entries have been received

for the Treasurer's Prize Essay. We would remind those men eligible, namely, all except qualified men of more than two years' standing, that the subject this year is to be: "The Factors Influencing the Drainage of the Serous Cavities, including the Arachnoid Space." Entries must be handed in by March 17th, signed with "nom-de-plumes," and accompanied by the writer's name and non-de-plume in a separate cover. So that they may know the number of entrants, the Secretaries would be glad to receive "nom-de-plumes" at once.

It was with considerable pleasure that we saw the fifteen beat St. Mary's Hospital on Tuesday last in a game that was fought out with plenty of hard knocks to all participating; but it was with some concern that we noticed so many Guy's supporters had forsaken the cheerless, sunless and wind-swept grand-stand side of the ground for the other, no doubt warmer and more cheerful, but traditionally always occupied by our opponents. Perhaps we are wrong in presuming any lack of hardiness in those adopting this change from ancient custom.

Post-Operative Treatment in Acute Inflammation of the Upper Respiratory Tract

A Clinical Lecture by T. B. Layton, Esq., D.S.O., M.S,

Part II.—The Care of the Mastoid Wound.

GENTLEMEN,—In a clean operation upon an uninflamed area a surgeon sews his wound up completely. If he has not infected the wound at the time of the operation it is almost impossible for it subsequently to go wrong. Within twenty-four hours, and perhaps within twelve, the tissues have thrown out a serum which by coagulation has sealed the deeper part of the wound from any fresh infection from without. The throat and ear surgeon seldom has to deal with such a case. He is faced with one and frequently with both of two difficulties. Either he operates across a mucous membrane that cannot temporarily be disinfected in the way that the skin can; or he operates upon an area which is inflamed, and he has to leave open the wound for an appreciable amount of time. During this period there is the possibility of some contamination from without. No amount of elaboration of surgical technique at the time of operation, no extravagance in the equipment of the operating theatre and its annexes, can prevent either the original infection or the secondary contamination. General practice resembles the work of our department. Nearly all the minor surgery, and much of the major surgery, in it deals with infected wounds. The concentration of clean wounds is only seen in the surgical wards of a great hospital.

I propose, therefore, to enter in some detail into the principles and technique of the treatment of those infected wounds with which we have to deal. As in my previous lecture, let us take as a type a case of acute osteo-myelitis of the mastoid bone. In such a case your wound is infected by the organism which caused the disease. This is nearly always the hæmolytic streptococcus. At the operation we deal with the diseased bone in such a way that we remove the infection of the hæmolytic streptococcus except for a certain residual amount which the natural resistance of the body overcomes. With the general treatment of this I dealt in my last lecture. During the time that this is occurring the lower end of the wound is left as an opening through which a rubber tube is put down to the juncture of the middle ear and antrum so as to drain the former. While the wound is open the surface of the skin becomes contaminated by organisms other than that which has caused the disease of bone. This may cause a dermatitis and spread into the wound. When this happens there is delayed healing and the scar becomes keloid. Far more important than this, however, through the wound and the antrum the organisms get into the middle ear; this then becomes secondarily infected. We do not know exactly the factors that cause an acute inflammation of the middle ear to degenerate into a chronic one; but it is fairly certain that the secondary

infection of the middle ear by the skin organisms is one. You see then the very great importance of care in the treatment of this wound. The operation is done, among other reasons, to prevent the middle ear disease degenerating into that distressing complaint chronic suppurative otitis media. The tube is left in so that the middle ear may heal and this may not occur. To allow such a wound to become secondarily infected is to spoil the work already done and to submit your patient to a complaint that will always be unpleasant and possibly dangerous in later life.

As with the general treatment of the patient so with that of the wound—we will consider it before, during and after the operation.

I—Before.

I am quite sure that the old way of compressing the skin is a much better method of preparation for this operation than the modern way of merely painting with iodine or picric acid. It is very seldom that an operation must be done on the same day as the patient is admitted; and the efficient preparation of the skin is another reason for deferring the operation to next day if it is possible. Plenty of hair should be shaved off; it is well to make the patient clench the teeth and then take the limit of attachment of the temporal muscle as the guide; as the area below and behind the ear is reached it is important to curve the line of the shaved area backwards to the mid-line and not forwards on to the mastoid. If this last be done it is very difficult to prevent hairs escaping from the towel into the wound. When a nurse is preparing a woman patient for you it is most important to be firm with her and to insist upon a proper amount of hair being removed. One has some sympathy with a woman's desire not to lose her hair; but if the wound becomes secondarily infected by the hair getting into it the surgeon is responsible and not the nurse. It is possible at this early stage to begin combing the hair away from the operation area upwards over the vault and backwards round the occiput. If this be done every time the compress or dressing be changed, the hair soon becomes educated to lie in this new position and much trouble is avoided at a later date. After the hair is shaved the whole area should be cleaned with spirit. In this respect it is important to remember that the part of the skin which is most likely to contaminate the wound is that within the meatus. This, therefore, should be cleaned with the spirit as well as the surrounding skin. The whole area is then covered with a warm wet compress. It is well to have some mild antiseptic (say 1 : 400 lysol), but this is not nearly so important as having it moist so as to get the skin thoroughly sodden. The warmth relieves the pain and obviates the need of an electrical coil. This compress is changed frequently during the afternoon and evening and during the night if the patient is awake. In the morning the sodden epithelium is removed by means of gentle friction with a piece of gauze or wool saturated in surgical methylated spirit. To do this in the meatus the wool is twiddled up on a stick and the spirit applied with this. An adult or big child can do this him or herself, by putting the other hand over the head and pulling the pinna upwards and backwards. It is important to get the meatus thoroughly clean and absolutely dry at this stage unless pain or tenderness prevent it. If the patient cannot do it himself a nurse may be allowed to do so. She must make the twiddles of wool in such a way that a good amount projects beyond the end of the stick. She will then do no damage to the ear.

II—During.

Some years ago Mr. Macnab, of Johannesburg,[1] after touring the world went home and wrote to the *Journal of Laryngology*. His letter was to the effect that when opening this bone the technique should, so far as possible, be that which Lane taught the world to employ when operating upon a bone in other parts of the body. As an ex-Lane H.S. and registrar, these remarks went home to me, and operating as I do in the old Lane theatre I have since endeavoured to follow Mr. Macnab's hint. I think the extra trouble taken is well worth while, even at the expense of a few more minutes of anæsthesia. It lessens the risk of contamination of the wound and gives a neat scar devoid of keloid, even when the wound has been kept open for a long time. In addition to the ordinary points of technique we have here to consider the anæsthetist, the skin of the pinna and meatus and the pieces of bone that are removed.

First you must get your anæsthetist to wear a mask and to cover his nose with it as well as his mouth. As a rhinologist it always surprises me to see the elaborate way in which persons in a theatre will cover all their body and leave exposed their nostrils through which they are expiring air that is almost certain to contain some kind of organism, and if they have the slightest suspicion of a cold will contain some of a virulent type. Next, you must ask him to roll up the sleeve of his overall; one often sees an anæsthetist lifting up the patient's head with a floppy sleeve hanging down so that it is impossible to adjust the sterile towels without this sleeve touching the gloves. It is much better for the anæsthetist to take the mask off the patient's face for a few seconds and to step back so as to let the nurse lift the head. Some

anæsthetists do not like allowing her to do this for fear she may flex the neck too far and too suddenly, so you must train the nurse to do it gently and with moderation.

The best way is for her to stand and face the surgeon, placing one hand under each side of the head and lifting the hair with the tips of the fingers at the same time. With the instruments, let a metal haircomb be sterilized. This is then handed to the nurse who comes round behind the surgeon, and putting her hand under his upraised arm combs all the hair back off the operation area as the surgeon adjusts and fixes the upper of the two towels that go under the patient's head. This and the other towels should be put on so that the selvedge is towards the wound. They can then be pinned to the edge of the wound with Lane's tissue forceps and all skin kept away from the operation area. In arranging the towels, the anterior one covers the pinna which is turned forward and thus the meatus is excluded from the wound. The inexperienced surgeon should, however, not do this if he is not sure of his land-marks. Remember that important as technique may be, an over-elaboration of technique will never compensate for an operation badly done or a structure wrongly damaged. For this reason I have given up using that anterior towel in infants and small children. I will recount a surgical tragedy to exemplify my point. Under the age of five there is no mastoid process, and the facial nerve where it leaves the temporal bone is subcutaneous. The importance of bringing the lower end of the incision backwards to avoid the facial nerve at this age is figured in Ballenger's text-book, and I am constantly laying stress on it in my teaching; and yet within the last year I have divided one in a small infant at a stage in my career when I should be beyond such things. The light was not as good as it might be, the table was a bit low, things were uncomfortable, and the anæsthetist a bit anxious, so that his fingers were always straying into the operation area under the towel as he held the child's jaw. When I wanted to extend the incision down, I undid the clip below the wound, and cut just as the anæsthetist moved the head. I had no knowledge that I had done anything wrong at the time, but the next day the child's face was found to be completely paralysed and it still is so, I fear, for ever. So I do not use the front towel now in minute infants.

The infected bone that you remove should not be scattered all over the place to reinfect the wound or skin as the dressing is being put on. A piece of gauze or open sponge should be laid out at some convenient place and every piece put in this. It can then be lifted up and dropped into the bucket at the end of the operation.

Now I want you to consider the condition of the skin in the region of your wound. The whole of your body is covered with a growth of organisms. You cannot see it, but it is there. It is like the fur that spreads on cheese or any other food that is left too long in the larder, and you can never get rid of it. You can keep the growth in check by frequent washings, you can temporarily remove it from a small area by the application of some antiseptic, but it will inevitably return within 72 hours. From the bottom of every gland or crypt with which your skin is studded these organisms will grow up again until once more the whole surface is covered, and as the microscopic growing edge of the growth of the fungus reaches a wound it will contaminate it, grow into it and secondarily infect it. It will not at first affect the health, but it will prevent healing, unhealthy pallid granulations will be thrown out to combat it, a slimy sero-muco-purulent secretion will form a pabulum wherein these organisms will grow more readily. And near the ear you have all the factors which conduce to the growth of these organisms in the most favourable conditions for their development. All over the body there are staphylococci, but in the auditory meatus are others as well. Hofmann's bacillus is nearly always there, and the bacillus xerosis, an organism that so nearly resembles that of Klebs-Loeffler that it is often mistaken for it by the inexperienced bacteriologist. You have, again, an exceptional number of glands opening on the skin in this region and of exceptional size. Behind the ear there are the hair follicles and very numerous sweat glands, within the pinna are many sebaceous glands, and in the meatus those modified sebaceous glands which secrete the wax. All the secretions from these glands are loaded with the organisms and the wall of every gland is lined with them. They are constantly growing up to the surface and round the corner. No antiseptic ever penetrates to the bottom of these glands and always there is left alive a growing edge from which the area will be covered again as the effect of any application wears away. In the ear you have the added difficulty of numerous folds and curves of the skin giving at once a larger amount of skin per unit of area, and nooks and crannies in which the organisms can lurk and from which they and the dirt in which they love to grow are with difficulty dislodged.

And with all these difficulties you must prevent those microbes growing round the corners into your wound. It can be done and you have got to do it, and the way in which it is done is by Care.

I remember Dr. Cameron's father—the late Sir Hector Cameron—coming all the way from Glasgow to teach us this lesson.[2] In those days surgeons used to open tuberculous joints and leave them open for a long time. We, at Guy's, having advanced—as we thought—from an antiseptic to an aseptic technique, got all of ours secondarily infected with staphylococcus, and when that happened the patient began to run a raised and swinging temperature. We students even used to think this rise of temperature was a part of the tuberculous process. And Sir Hector came and showed us charts of patients with open tuberculous joints running an apyrexial temperature for month after month, showing that the temperature was not a part of the tuberculous process, but was due to the secondary infection. Now Sir Hector Cameron had been assistant surgeon under Lister, and was still using Lister's antiseptic treatment to his wounds.

You cannot use with success an aseptic treatment to a wound which must remain open, it is wrong in theory and it fails in practice. Your technique must be an antiseptic one. Sir Hector used to use a gauze wrung out in a solution of carbolic and changed it every day. Except that surgical methylated spirit has replaced the carbolic the treatment of mastoid wounds to-day is the same as that which Lister used in the seventies of the last century.

Whatever views you may have as to the use of alcohol internally, there can be no doubt that it is the most useful preparation that we have for the skin. Its value depends upon its being dry and hygroscopic, upon its being a solvent of fat, upon its being a germicide in a strength that will not hurt the skin, and upon its being a cutaneous stimulant.

Let us consider each of these points separately. In the presence of moisture certain organisms, of which the staphylococcus is one, have the power of splitting fats into glycerine and fatty acids. These latter have all a smell which is, more or less, pungent, and which varies according to the acids formed. It is a process of nature of which the dairy industry has made use. When it is carried to a certain stage an aroma, which most will call pleasant, results, as in the ripening of cheddar or of stilton cheese. Many, however, do not regard as pleasant a well-ripened Gorganzola, and I doubt whether there are any of our countrymen whose nasal æsthetic taste is sufficiently developed to appreciate the cheeses made in the towns of Limburg or of Olmutz. When the change occurs in the secretions of the body it is always unpleasant. It is this change which causes the unpleasantness of dysidrosis of the feet or of atrophic rhinitis. When the discharge from a child's ear is curdy and has this characteristic and unpleasant smell, you may be sure that it comes from the skin of the ear, and that even if the middle ear is affected it is the outer ear that is causing the discharge. Now the skin around our mastoid wound is particularly suited for this change to take place. It is already moist from the sweat under the hot wool and bandage, and in the sebum and cerumen there is much fat that can be split by the action of the bacteria. Further, when the process once starts it is particularly liable to extend in any area where skin can touch skin. You know the condition that occurs in the groins of fat old women where the pendulous belly hangs against the thigh. This condition will repeat itself behind the ear if it gets moist and the pinna be bound down so as to touch the skin over the mastoid bone. So we must keep our skin dry, and the best dry antiseptic—perhaps *the only one*—*is spirit*. If any watery antiseptic, such as eusol or hydrogen peroxide, be used at the time of dressing, it must all be wiped away and the skin dried with spirit before the fresh dressing is applied. The value of spirit as a solvent of fat is now understood, it removes the pabulum in which the microbes like to grow. But other pabula must be kept away, the blood that has flowed over the skin should all be carefully removed or it will form a clot under which the staphylococcus will grow, and this is why I do not use iodine if I can help it. This preparation forms a coagulum on the surface of the skin that subsequently has to separate and peel off, and under it I have often seen a slight and superficial infection spreading widely unnoticed until this peeling begins. A trouble with many antiseptics is that in a watery solution it is impossible to apply them in such a strength that they will hurt a microbe without doing greater harm to the skin. Now a damaged skin is just the one on which a microbe will develop. Skins vary very much in this, some persons can plunge their hands into strong lysol and shake it off again without its causing any harm; but it is not so with most. If any here have hands like that please remember that few skins will stand such treatment and that behind the ear is a tender, delicate area. More harm may be done by dabbing lysol on than ever it can do good. This is why those bowls of lysol with nail brushes lying in them are such a danger. They make the young student or probationer think they have disinfected their hands by dabbling therein, whereas they have only made them more liable to carry an infection to the next patient. Now spirit is an efficient antiseptic and there are few, if any, skins that it will hurt. Other antiseptics may be dissolved in it, picric acid is one, but this

will sometimes give a dermatitis that, in my opinion, forbids its use. Iodine is more expensive and is rarely needed for the fine clean skins of children or of young adults. I still use it for hirsute men or for women of the seborrhœic type. Lastly, spirit is a healthy local stimulant to the skin, improves the circulation through it and thus increases its reparative powers.

Having considered the principles we can now describe the details. When you leave a part of a wound open, use great care to sew up the rest neatly. With the mastoid cut this is not easy owing to the curve in two directions. The wound itself is curved and the skin on which it is placed is curved with the convexity of the mastoid succeeded by the sharp turnback of the skin as it is reflected on to the pinna. It is well at one place to get the whole depth of the tissues firmly in contact and this is best done by a longitudinal mattress suture.[3] Above and below this use interrupted skin sutures taking care to obtain perfect apposition of the skin edge and leaving plenty of room at the bottom for the drain, and between individual stitches so that blood or pus will escape between them if any of either collect.

The object of a drain is so to keep open a wound that a space be left by which fluids can escape into the overlying dressings. These dressings are of an absorbent material, and, therefore, the drain must not be. It shows a confusion of thought to put *in* a wound where a free flow of fluid is needed the stuff which you use *on* the wound to absorb these same fluids. When any gauze is tucked in it takes up fluid, swells, and in a few hours is a tight plug. It never acts as a drain and should never be used as such. It has the further disadvantage of affording a means of entrance for the skin organisms by way of the body fluids with which it has become soaked. A drain must afford some rigidity and be easy to sterilise. Tubes of bone, glass or metal suit a bone abscess very well,[4] but not in the mastoid where a turn of the head may cause pressure and so pain. Quite rigid tubes have another disadvantage, the blood or serum may dry or clot in the lumen of the tube or between it and the edge of the wound. In this way the drainage may be impaired for a time. A tube which has rigidity and yet some give is, therefore, best, and that is why we use rubber. Personally I always slit it up so as to give a little more play. In soft tissues a rubber dam made from an old glove is useful; but in a mastoid it is not successful as it tends to slip out. Your tube should go down to the junction of middle-ear with antrum, and should stick out of the wound just far enough to wrap around it a wisp of gauze.

Having sewn up your wound put in the tube, clean up the whole skin area so that no blood clots lie upon the surface and dry again with spirit.

Cut the stitches long so that when the pinna lies flat against the skin the ends project. This will prevent their sticking into the skin of the pinna and causing small painful ulcers. Remember next, that fluffed-up gauze absorbs more than folded gauze and also fits more closely into cavities. Do not, then, put it on in pads like neatly folded handkerchiefs. Open it out to its last fold, and curl it around in the groove between the pinna and the head arranging it so that the suture ends lie against the latter. Place another piece of fluffed-up gauze against the pinna to cause this to lie against the first. A third piece may be put below and behind to absorb any blood that may come from the bottom of the wound.

Over all place a thin piece of wool so as just to cover the dressing. I do not like standard chunks cut in circles. They make you clap it on anyhow, whereas you want to fit your wool to your patient and his condition. Wool is put on to absorb discharge and to afford an even surface for bandaging. We usually put on too much. It is one of those points of technique handed down to us from the age of suppuration to which we have heedlessly held. We seldom get the cases now with pus pouring out into the wound so that the dressing has to be packed between one change and the next; and yet we continue to put on large pieces of wool which only lead to discomfort and untidiness.

Now remove all the dirty towels right off the table. Get the nurse to lift the head in the same way as she did when you were adjusting the towels, and let her use her splayed-out hand to hold the dressings in place till the bandage is on. Next clean up any blood that has flowed on to the skin beyond the area covered by dressings or on to the hair. Use warm water and soap if need be, and take care to dry the skin after. Before the head is laid down again see that there is no blood on the underlying mackintosh or sheet and protect the clean head from it if there be. Lastly, use the comb, educating the hair away from the wound in the two directions indicated above.

You are now ready to put on the bandage. Stand at the end of the table above the patient's head facing the nurse. Do not try to bandage in your gloves. The form used is a converging figure of eight. Start over the forehead with the bandage turned away from the bad ear and its lower edge well down over the upper margin of the orbits. The first turn goes straight round, fixing the bandage and covering the upper edge of the

wool on the dressing. The next turn goes right down to the bottom and covers the lower margin of the wool coming up again over the zygomatic region. It is then merely a question of following the border to complete the figure of eight. Each turn fixes in place the one before, but pressure is not needed. While putting on the bandage do not worry about it going over the eyes, but do worry about the other pinna. Let the nurse who is holding the head turn down its upper end, the bandage then slips into place over her fingers at each turn. After it is fixed, tighten it up in the neat way that Mr. Mollison uses. To do this, put a pair of forceps down between the turns of bandage and the skin above the eye of the same side as the bad ear. Pull a short length of bandage through and tie this firmly over the turns to bunch them together. This will get the bandage out of the eyes and will tighten slightly the upper and lower turns where they pass over the dressing so as neatly to cover the margins of this. You may, if you like, start with the bandage the other way so that the turns go down and back over the ear; and if a double mastoid bandage has to be put on, one side must be in this direction. Lastly, remember that it is easier to teach someone else how to put on a mastoid bandage than it is to put one on neatly yourself.

III.—After.

If you want a good result with your mastoid case your task is not finished. The staphylococcus and other skin organisms will grow up from the hair follicles and various glands and go round the corner into the wound or through the perforation in the drumhead unless you are still very careful. Every day you must take out the tube and boil it before replacement. And you must attend to the toilette of the skin. If you have been careful at the operation there will not be much blood about, but such as there is must be removed; and every piece of skin be again painted over with spirit so as to keep up a barrage between your wound and the invisible growing edge of the skin fungus. In doing this do not forget the meatus. Daily with twiddles of wool on sticks you must mop it dry and then, dipping a twiddle in spirit, paint the skin of the meatus with gentle friction. It is the meatus that you must worry about, keep the tube in at the back till this stops discharging. In ordinary cases this will be in four or five days, but sometimes it will be much longer.

Do not be too busy at the first dressing, the part is very tender; on the third day when the temperature has subsided and the area is not so tender you can do it more thoroughly. Take out the tube when the meatus has ceased to discharge for two days. Do not then put anything back. Do not shorten it bit by bit, and above all do not put in a wick of ribbon gauze. Get rid of the bandage as soon as possible, even if there are a few granulations not yet covered by epithelium; but do not retain a piece of dressing in place with strapping. It always makes a mess and it hurts when taken off from the short growing hairs. An ordinary mastoid wound treated in this way will be healed with a dry ear in eight to ten days or a fortnight. It is a matter of care and attention to detail.

There are, however, many cases of inflammation of the mastoid which are not ordinary. There are certain types where it is inadvisable to sew up the greater part of the wound. A low reparative power of the tissues is one. This is well seen in scarlet fever, but also in our practice here when the mastoid disease is associated with marked enlargement of glands, and much inflammation of the upper respiratory tract. In such a case if the stitches sew the wound up at all tightly, one or more will cut through and leave a nasty jagged ulcerating edge. The most that should be done in such a case is to put in a single longitudinal mattress which grips all the tissues down to the periosteum and just holds them in contact without being drawn tight. Such a case may take some time to heal and the care of the skin in the intervening period is all the more important.

Another group includes those cases where the wound cannot be sewn up at all. If there has been any early sign of meningitis such as neck rigidity, if there is very severe toxæmia, or if the sinus has been found covered by granulations with an extradural abscess, the wound should be left widely open. Sometimes it is hard to keep it so. A fluffed-up piece of gauze may be lightly tucked in; but should then be changed twice daily for fear it plug the opening. Once I left in the self-retaining retractor, but the patient rolled over in his sleep and it hurt him. On another occasion I threaded ribbon gauze through the external auditory meatus and fixed the whole pinna forwards by tying a bandage to the gauze. Whenever the wound has to be left open like this I have found that douching it with large quantities of physiological saline is the best line of treatment. I use an ordinary douche can, with a long piece of tube and glass nozzle, and then play on the wound and into every nook and cranny thereof with several pints of saline. It is done first at the end of the operation, and is then repeated once or twice and even three times a day. There is no need to make a mess if a little care is taken to arrange a mackintosh under the patient's head and over the side of the bed into a bucket beneath.

It is, however, easier to do if the patient be lifted on to a firm table.

I have had a series of patients now who have had rigid necks before the operation and who have recovered after this treatment was employed. Usually in the infectious fevers one does not fear meningitis, but about two years ago we had a series of cases where a rigid neck developed and they all got well. They may, of course, have been examples of meningismus, but I refuse to recognise such a condition in the presence of an infective focus near the cranial cavity. Nor will I have a lumbar puncture done for fear of disseminating over the cerebro-spinal cavity the few organisms that we may presume to have gained access locally. Some of the medical officers in charge of the cases used hypertonic saline and thought it more valuable. Theoretically it should encourage the flow of the body fluids outwardly to the wound. This is of value ; but I feel sure that the important part of the treatment is the mechanical removal of every piece of infective material from out the wound.

In cases of severe toxæmia this treatment is more efficacious than any bathing of the wound by eusol or its modifications, and in all my clinics has quite replaced the use of Carrel-Dakin's Tubes. In the days that we used these I had a child in Ruth severely toxic, into whose wound we fitted tubes and pumped in Dakin's solution every few hours. The overlying dressings became soaked and the moisture spread along the bandage till it irritated the skin of the sound ear on which she was lying. Within twenty-four hours the tip of this pinna had sloughed away, and she now looks as though the tip of the ear had been broken off like the man in Edmond About's story, " L'homme à l'oreille cassée." The douching treatment prevents the recurrence of such an accident. After the douche you must dry the skin and wipe it over with spirit or the skin organisms will succeed to the toxic ones and prevent healing after you have saved the patient's life.

Since using this treatment I have seldom slit up a lateral sinus. I think the time will come when we shall never do so unless the wall is actually gangrenous, so that secondary hæmorrhage is likely to occur if left to itself.

If you think of it, the thrombus inside the sinus is the means whereby nature tries to prevent the infection from without spreading into the vein. It is not in itself serious until the clot becomes infected and starts to break down into pus. If the infection without is stopped, this clot is rapidly replaced by granulation tissue arising from the endothelial lining. To put into this clot a needle attached to a syringe is about the worst thing that can be done. It is but to make a stab culture in the sterile clot. To slit into it is nearly as bad. The right thing to do is to leave it alone and let the granulation tissue form. How rapidly this may happen when the infective material is removed was taught me by a case on which I operated last spring. A boy who had doubtful signs of mastoiditis, was found to have an extensive extra-dural abscess with early granulations on the dura. I hesitated whether to cut into the sinus, but refrained, and douched the wound instead. This treatment was carried out with great thoroughness three times daily by the doctor and nurses who looked after him. As often happens in the mastoid cases with few signs, he was much worse after the operation than he had been before it. Fearing it was a thrombosis of the sinus that was causing the symptoms I slit into it. I found no clot, but a solid mass of pale, healthy, firm, granulation tissue. This was only some sixty-five hours after the operation and must have formed within that time.

This is, I think, the most useful form of treatment that I have learnt in the past two years. No doubt it is quite old ; but it is applicable to other cases than to those where the wound is left widely open. The temperature after a mastoid operation should fall to normal after 48 hours. If it does not do so, wash out the wound cavity with a pint or two of saline in the way I have described. Often the removal of a slight amount of infective blood clot and serum will bring the temperature down at once. If it does not, one begins to be anxious as to complications. Sometimes it is the inflammation of the throat that is keeping up the temperature. In one such case washing out the nose with a syphon douche brought down the temperature at once. It had been going up to 104°F. every night for many weeks.

I have been talking to you to-day about details. I do not say that every detail is essential to the recovery of your case. But I do say that attention to every detail is essential to the recovery of your cases. If you think of 30 details and then fail in six, you still have 24 points in which you are assisting nature. But if you only think of six and bungle three of these, the scales become heavily weighted against your patient. It is not brilliancy[5] that gets a surgical case well. It is Care.

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The Residents' Play

"REP. MIST." OR "THE MAGIC SIREN"

EVERY good mixture should contain four principles:—

1. The Basis.
2. The Adjuvant.
3. The Corrective.
4. The Vehicle.

The Residents' Play observed this rule with the same excellence with which it maintained the high standard set by its predecessor of last year.

The Basis would, no doubt, have been described by the Dispenser as "Pulv. A.B.C.," a powdered essence of Abrahams, Boland and Conybeare. S. I. Abrahams needs no introduction as a writer of lyrics, for no one will forget the exquisite sentiment of "The Gentleman from Guy's," and his light but masterly touch was evident again this year, as well in the purely sentimental love songs, as in the more satirical verses of the "Song of the Squatt" or "A Young Girl's Dream," whereas he harmonised with Boland in the frankly Gilbertian style of, for instance, "Good Morrow, Now, Sweet Nurses." For E. R. Boland's plot, every detail of which fitted in so cleverly and thoroughly, produced, nevertheless, that delicious air of inconsequent disregard for probability, on which W. S. Gilbert's charm depended, and was embellished, in parts, with the most delightfully pantomimic situations, such as Brayton's Satanic entry after "the Matron's" Fairy-Queenly recitation at the end of the first act. But any producer will tell you that the three most difficult types of entertainment to stage are comic opera, pantomime and a Residents' Play. Given a ridiculously small stage, an equally ridiculously small exchequer, and a caste of inexperienced actors—the adjective is meant literally, not disparagingly—E. T. Conybeare produced stage effects and lighting worthy of Mr. Edgar Wallace's latest thriller. The "curtain" of Act I, Scene I, was almost too realistic to be pleasant.

The Adjuvant, again in the language of the Dispenser, was Ol. Ive and his music. Aptly as he suited his music to the lyrics?—might not Sullivan himself have written "A Young Girl's

Act I, Scene I: The Nurses (left to right) Arsula Pernio (R. Glanvill), Myoma Sprue (E. R. Mellon), Addie Noma (J. C. Heather), Hernia Polyp (F. E. Camps).

Dream," or "Pray be seated, Madam"—his individuality came irresistably to the fore in two tunes especially—"Rep. Mist." and "So With Us Two." His fortune could be made from these two tunes alone, were he not a medical student, and, therefore, incapable of making his fortune.

A Corrective is, once more according to the Dispenser, the factor which modifies any ill-effects of the effective drugs or covers their flavour. The audience fulfilled this function excellently, and we hope that the Residents were, to some extent, repaid for the hard work they had obviously put into the show by the sight of a House packed on each of the five nights with a thoroughly appreciative audience.

And the Vehicle was the caste. Apart from the surprising amount of individual talent, the chief merit about the caste was that each member was content to distinguish himself when his turn came, and to remain natural and unobstrusive, but not idle, when it was someone else's turn—(or are we again inadvertently praising the producer ?).

The play opens with a quartette of Nurses—Messrs. Camps, Glanvill, Heather and Mellon, much more locally effective than any Punchinello, and a credit to Miss Shepherd. They set the puritanical minds of the audience at rest with the following song :—

Every act's simply packed full of tact
So come and see the play.
Though the Dean hasn't been every scene
Is perfectly O.K.
Nothing there for Chubby or McNair to fear
Or make the Super choke.
Nothing Sister Job would ever blush to hear,
Just a harmless joke.
Take your seat, it's a treat, you shall meet
Some people there you know.
All the girls in their curls, simply pearls
From Sister down to Pro.
Then see the Residents ragging there, but oh !
If you expect to detect intellect
Then don't come and see the show.

Though the play seems to flay Tubby Layton, pleasures are intent.
Though it's bliss, just to hiss at a Sister, malice isn't meant.
Every naughty word has been discreetly plucked,
Not a single "damn."
If we don't amuse, we hope we can instruct
Every little lamb
More than half of the Staff come to laugh and bring
Their families.
Dr. Knott, Dr. Scott, Dr. Watt are rather hard to please.
Then see the Residents ragging there, but oh !
If you expect to detect intellect
Then don't come and see the show.

Act I, Scene I, was laid in an anæsthetic room. It appeared that Mr. Brayton, a distinguished

Act I, Scene I : The Anæsthetic, (left to right) Squatt (S. Shone), Angina (T. T. Stamm), Ward Clerks (H. Densham and H. Richards), Brayton (F. Booker). On Trolley : Ethyl (S. D. McClean).

throat specialist engaged in writing a book on oto-rhino-laryngology—played with admirable determination and dangerously excessive vocal strain by F. G. Booker—was proposing to remove the tonsils of his late House-Surgeon, Ernest Ethyl—acted by S. D. McClean, whose manly figure and handsome pyjamas made us all wish we could be House-Officers—who was allowing himself to be so victimised in the hopes of being rewarded by his well-contented surgeon to the extent of a job on the Junior Staff, a Hundred a year, and his fortune made. This would enable him to marry the pretty heroine, Angina Louise—in which part T. T. Stamm displayed a thoroughly intimate knowledge of feminine wile entirely unsuspected in a mere President of the Residents—and thus one of their dreams would come true. Their other dream, that here in the Hospital everyone should be friendly and happy, all working for the same end, seemed impossible of attainment, but Ernest promised to do his best, when, detonsillar, he should be a new man.

Ernest, refusing to have the courage of Mr. Brayton's convictions, had insisted on a general anæsthetic, and Mr. Squatt—played with life-like impersonation by S. Shone—and his "partly all-there" anæsthetic clerks were in attendance. Mr. Squatt,—whose favourite remark appeared to be, "Have you heard this one?"—pandering to the admiration of his Clerks, revealed the simplicity of his anæsthetic methods in the following song :—

Now here's the anæsthetist's art complete.
To deliver a good anæsthetic.
You should see that your victim has nothing to eat,
For your labours are often emetic.
Remove his false teeth before starting the dope,
Away with false legs and glass eyes,
Then take from your pocket an old stethoscope,
Put it over his spleen and look wise.

Then a minute or two you will let pass you by,
While the Sister you are tenderly chaffing,
And then if the patient has fear in his eye,
You administer gas known as laughing.
You mustn't much mind if his heart isn't strong,
Or his chest is bronchitic and wheezy ;
Change to ether and chloroform, that can't be wrong ;
You will discover the job's C. and Easy.

You will find if you look in the books on the art,
They divide in their erudite pages
The onset of coma and failure of heart
Into quite a large number of stages.
Now in my opinion the stages are two
(For it simplifies things if they're fewer)
The first is the stage where their faces are blue,
Number two's where they're bluer and bluer.

When the patient is under more pads you must use ;
Your watchword the chloroform pour is ;
And then in a corner indulge in a snooze,
Or retail some amusing low stories.

Of course you take care to pick out a nice pro.,
That is if you're fond of a dimple.
For idling's an art, I would have you to know,
But giving a dope—why it's simple.

Chorus :

Oh ! a fast 'un is Shipway,
And Marston's the Drip-way,
But if you want to know what's what.
Well, I have another way,
They call it the smother-way ;
And all the patients shout "Great Scott"

Apprehension began to fill the hearts of Ernest and his Angina when Mr. Brayton insisted on Mr. Squatt's clerk administering the anæsthetic, for although he was a very senior anæsthetic clerk, he had never yet given an anæsthetic. However, at a signal from Squatt, the induction commenced, to proceed adventurously but slowly up to its climax. Scene II, which was laid in what might be called "Heaven's Front Surgery," where Saint Nicholas, a sort of celestial O.P.O., was discovered discussing with Maydo, a celestial porter, the list of expected new arrivals. Saint Nicholas, arrayed in a garb which instantly suggested 1.30 on a Monday afternoon, bore a very remarkable resemblance to a familiar figure who may at any time be seen creeping down the Park or "shinnin-" up the stairs of the Surgical Block. The part was undoubtedly the most brilliant character study of the whole play.

Presently Ernest Ethyl appeared on the scene, and it soon became evident that Mr. Squatt's clerk could have done with many more than five months instruction in anæsthetics. On consulting the celestial R.S.O. list, however, it appeared that no bed had been reserved for Ernest here in this peaceful atmosphere of tinkling harps and angels' wings. Saint Nicholas very obligingly put through a trunk call to "the other place," but, after a conversation with his friend *Old* Nick, it appeared that Ernest was not expected there either. The puzzle was soon solved, however, when it transpired that Ernest had had an anæsthetic, for Saint Nicholas assured him that he had had a very lucky escape, and was not dead at all. In his disappointment Ernest implored the worthy Saint to give him a souvenir of his visit, and after some hesitation, was presented with what the heavenly pathologist described as a "tin whustle," but no ordinary tin whustle, for whenever used it would have the most remarkable effect on those who heard it.

As the curtain rises on Scene III, Ernest is seen coming to earth with a bump, right in the middle of the Colonnade. Here he is discovered by

Angina, by whom, when he tells her of his recent visit to Heaven, he is suspected of being drunk. By way of proof, he shows her the Magic Siren, but she is difficult to convince, and it is only the prospect of his longed-for embrace that tempts her forgiveness, and so it is that they are surprised in this attitude of intimate and loving reconciliation by Mr. Brayton, who has overheard their plans to suffuse Guy's with goodwill by the aid of Saint Nicholas's gift. He warns them that they will find in him a powerful enemy should they in any way attempt to alter the constitution of the Hospital. Heeding not his threat, they witness from their hiding place in the Porter's Lodge, a woeful pageant of nurses, a lonely matron and over-worked ward-clerks, and determine to try the effects of the siren on these unhappy wretches. Hardly have the strains of Ernest's magic blast died away than the nurses and ward-clerks return and with punctilious politeness profoundly profess their respect for each other. Attracted also by Ernest's celestial music, the Matron, a sometime martinet, returns, and beaming with satisfaction on this early morning idyll, avows that "her aim in life, her one ambition, is to see that every dresser has a little nurse, and every little nursie has a man." Not unopposed, however, goes this Fairy Godmother's blessing, for the sinister figure of Brayton appears, his cyclopic head-mirror reflecting the crimson light of his soul, and with Satanic cackle, he delivers in stentorian blank verse his dreadful oto-rhino-laryngological curse on Ernest and his beloved nurse.

THE WARD-CLERKS' SONG

Work, work, nothing but slaving,
Soon in the day as we finish our shaving,
Though we are tired by the time we are dressed,
Yet we have never the chance of a rest.

First there's a round—a registrar's round ;
Then for a drink to the "Ship" we are bound.
Then a brief snack and we start once more,
To hear a dull lecture, it's always a bore.

Then we have lunch for two hours in the College,
And go off to "Ops" to replenish our knowledge.
Then when an abdo or two we have viewed,
And ticked off the nurses (who seem to us rude),
We just snatch a moment for tea in the "Spit,"
And dominoes too if the fire is lit.

Then there's just time for a glance at a novel
And one final round at the old "Ship and Shovel."
Nobody cares for our weariness utter,
What's a poor Ward-Clerk mean dead in the gutter ?

Act II. The curtain rises on a room in Out-patients, where the nurses are discovered consoling themselves for the hardships of their daily work—of waiting for the Surgeon, with this sound piece of philosophy :—

Oh ! who would be a nurse and share
The lovely larks and healthy air
The climate mild and prospect fair—
Of living in the Borough.

And who would like to do some work
(There isn't any chance to shirk)
Amidst the dear delightful murk—
Of this salubrious Borough ?

And who would like to share the pay
(It isn't very much, they say)
For slaving here both night and day—
In this confounded Borough ?

First Matron gives you an exam.
(Remember not to call her ma'am,)
Though everyone may call you "lamb"—
Especially in the Borough.)

And then you learn to bear abuse
And how to make a good excuse,
And most of all to wash the sluice—
The sluices in the Borough.

Ignore the Surgeon's language strong,
Remember where the splints belong
And that the Sister's never wrong—
At least, not in the Borough.

And if you please her every whim,
You'll be rewarded for your vim,
She'll even let you choose the hymn—
One evening in the Borough.

Long rounds you needn't grumble at,
You're seldom much the worse for that
Excepting that your feet are flat—
From standing in the Borough.

If put on night you needn't fear,
The H.P.'s usually a dear,
And not so dull as would appear—
By daylight in the Borough.

You serve as nursie staunch and true,
If Ashdown's shade approves of you
You may at length become a Blue—
A-blooming in the Borough.

Brayton and Sister Passage—J. B. Robinson—enter, and agree that the situation is becoming serious, and that the constitution of the Hospital is being threatened by the rebellious influence of Ernest and Angina. Lest the magic siren should upset their common sense, Brayton advises Sister Passage and her bodyguard of girls to stop their ears with cotton-wool against its mellowing notes. Slightly apprehensive of Mr. Brayton's increasingly bellicose tones, Sister Passage attempts to lead his thoughts to more gentle, more sylph-like, to altogether smaller things, and almost a smile passes over their countenance as they remember with fondness each his or her respective "baby" :—

Mr. Brayton :

I'm very fond of roses,
I have a taste for beer,
I have a flair for noses,
I'm partial to an ear ;
In my garden each poor dresser
I like who digs the sod,
But I adore my baby, bless her,
My baby ticking over in the quad.

I love my baby,
When she doesn't back-fire ;
I love my baby,
Though she puncture every tyre.
When within I sit
It's a tightish fit ;
Oh ! I treat her rather rough.
Then the horn I touch
And depress the clutch
And we both begin to rattle and to puff.
I love my baby
My little Austin cot.
I love my baby,
For she's all I've got.

Sister Passage :

I'm fond of Bach and Handel,
I worship brawn and muscle,
I like a bit of scandal,
I revel in a tussle ;
My bent is all for power,
No passion here you'll see,
But I have a secret bower,
Where a pretty little baby waits for me.

I love my baby,
When she doesn't back-fire,
I love my baby,
She's a thorough little trier.
When I grind the gears,
I dissolve in tears,
But at her I never curse,
For she's 7 H.P.
And the world to me,
Though I wish she wouldn't wobble in reverse.
I love my baby,
My little Austin cot,
I love my baby,
For she's all I've got.

We are then given a delightful exhibition of the treatment of Out-patients "in this salubrious Borough." The actors in this little sketch are the patient, Mrs. Gentian—a part in which S. Shone is wonderfully true to life ; a Surgeon, Mr. Slicky, from whose headache J. M. Lees might himself have been suffering, so realistic was his acting ; a Physician, Dr. Twitts, the shade of whose green tie, and the angle of whose drooping lock, R. Glanvill had matched as closely as he caught the æsthetic Lancashire intonation ; and an Eye Surgeon, Mr. Gourmond, who explained through the mouth of an involuntarily stiff-necked D. B. Smallshaw the primary function of the eye in many synonymous phrases. The only person who seemed to have derived no satisfaction from this exhaustive investigation was the unfortunate patient, and once again Ernest and Angina decided to invoke the aid of the magic siren on her behalf. No sooner had its celestial strains died away than the three specialists returned with alacrity, and revealed in its true light the Spirit of the Borough :

Now pray be seated, madam, see, we enter at the double.
We hope you are not ailing, won't you tell us what's the trouble ?

Mrs. Gentian :

Now let me say at once, dear sirs, it's simply idiotic
To tell you of my symptoms for I'm hopelessly neurotic.
It's an honour and a pleasure for us patients to be sitting
In your comfortable department with our gossip and our knitting.

Mr. Gourmond :

Alas, our poor department only offers slight attraction,
But if you'd like I myself will measure your refraction,
And if, as is more than likely, that your sight as normal passes,
We'll give you a prescription for some tortoise shell-rimmed glasses.

Dr. Twitts :

The function of your liver is the thing I'd fain be testing ;
Results are worse than useless, but I think them interesting.
I know, of course, the drugs I order cannot make you better,
But, if you'll kindly hand me your appropriate O.P. letter,
I'd just repeat your Olive Oil and Liquid Paraffin
(To lubricate your pram and help to clean your sewing-machine).

Mr. Slicky :

Won't you kindly look around and see what you desire ?
I've lots of little wooden splints to light the morning fire.
Although to be quite honest I can't do you any good,
Won't you take as a memento just this little piece of wood ?

Mrs. Gentian :

I am quite overwhelmed by your kindness,
For ever I'll treasure this token,
But as I don't suffer from blindness
And as none of my limbs as been broken,
I fear I have wasted your leisure.

Specialists :

Dear Madam, no trouble, a pleasure.

However, not with impunity are such expressions of good will allowed to pass, for Satan triumphs still, and Brayton and Sister Passage enter accompanied by four buxom Massage Girls to arrest the luckless pair who so persistently defy their

authority. In vain does Ernest attempt to soften their hearts with his Orphean harmonies, for are not their ears deafened with cotton-wool? and so to the strains of the March of the Massage Girls the two lovers are led out to await in strict confinement the full penalty of their crimes.

THE MARCH OF THE MASSAGE GIRLS

Here we come with martial step,
Here we come with lots of pep.
Tremble now ye halt and weak
And admire our grand physique.

Pinkety pong—that's rapotement
And we give it hot and strong.
Rub-a-dub-dub—that's effleurage.
Oh, we revel in massage.

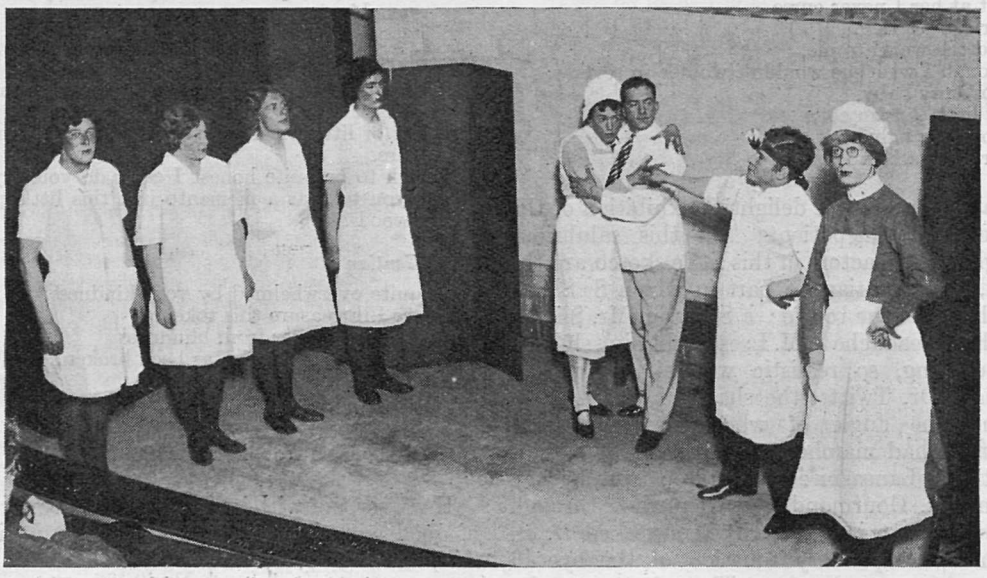
Take a big, big breath when you think of Treth or of
Dr. Douthwaite's curls.
All the patients squirm when they do "hips firm" to
the March of the Massage Girls.
Kyphosis hastens to unbend
And broken bones begin to mend.
Take a big, big breath when you think of Treth or of
Dr. Douthwaite's curls.
See them stand in rows and attempt to touch their
toes to the March of the Massage Girls.

Oh, we look our best when we do "Neck rest" to the
March of the Massage Girls.
Arthritis ceases to go crack,
Adhesions all begin to snap.
Oh, we all have fits when Sister does the Splits to the
March of the Massage Girls.

And we earn great praise when we do heels raise to
the March of the Massage Girls.
If knees and hips will not go straight
Our Douthwaite will manipulate.
If you dare to shout we'll knock you out to the March
of the Massage Girls.

Though you're stiff as starch you will have to march
to the March of the Massage Girls.
Our beefy arms are firm as rocks,
Our legs are known as Massage blocks.
All the Nation cries Hip Hurrah for Guy's and the
March of the Massage Girls.

Act III. Ernest has been imprisoned in the Hospital's darkest dungeon—his room in the College, and the curtain rises on the College Porch a few minutes before midnight on Christmas Eve. With the aid of her influential friend, Staff-Nurse Hernia Polyp, Angina manages to steal a forbidden tryst with her lover. It appears that even now their fates are being sealed by Mr. Brayton and the Governors in the Court Room. Things look pretty bad, for Sister Passage enters in tears, and in repentant voice explains that whereas she herself has yielded to the charms of the magic siren, which she has been playing in the solitude of her room, this all-powerful instrument has been snatched from the hand of Mr. Brayton as he was walking down the Colonnade, and is now irretrievably lost. Angina and Ernest abandon themselves to their fate, and they have not long to wait, for the Governors soon appear, led by



Act II, Scene II: "Take Them Away" (left to right) Massage Girls (L. K. Wills, W. B. Jones, F. Stevenson J. B. Blaikley); Angina and Ethyl; Brayton and Sister Passage (J. B. Robinson).

Act III, Finale : (left to right) The Governors, Angina and Ethyl, Guy (N. E. Pitt), Brayton and Sister Passage, Nurses.

Mr. Brayton to pass their sentence. Disencumbering his ears of their protecting cotton wool—for he can't hear his own voice, Mr. Brayton proceeds to declaim the Governor's decision, but is interrupted by the appearance of the ghost of Thomas Guy carrying in his hand the magic trumpet. For the last time the siren is sounded, and Mr. Brayton, his ears now unprotected, for the first time hears it. The effect is as wonderful as it is instantaneous, and with his forgiveness, the powers of evil are now completely shattered. Led by their Founder, the company ring down the curtain to the tune of :—

Gone now is yappiness,
Welcome to happiness,
Welcome the coming of freedom and joy.

Gone now is vanity,
That is insanity ;
Bickering ceases to harm and annoy.

Quarrels stop festering,
Sisters stop pestering,
Nurses are clever and dressers are wise.

Ward-Clerks are dutiful,
Ward Maids are beautiful.
Hail to the era of gladness at Guy's !

Bone Formation and Bone Repair

A Paper read before the Physiological Society by Mr. A. G. Potts

MR. CHAIRMAN AND GENTLEMEN,—Bone surgery at the present time plays a very large part in the activities of the surgeon, and the technique which he uses in operation has been built up from the observations and experiments which have been made by anatomists and physiologists in the past. Their experiments are still being repeated and extended under more favourable circumstances, for it is still not agreed or perfectly understood how a bone is formed and how it repairs itself after fracture.

I propose, therefore, to give you an account of the history attached to the knowledge which we now possess in connection with this subject, and to lay before you the facts which have led up to the two main theories regarding bone-formation.

The earliest account that we have dates back to 1736, when John Belchier, who had just been elected to the staff of this Hospital was invited out to supper by a calico printer of the City of London. A leg of pork was placed on the table, and Belchier noticed that the bone was stained a

peculiar reddish purple colour. His interest was aroused, and he found that his host, who was an economical man, fed his pigs on the madder-soaked bran from his dye vats.

Belchier proceeded to carry out some experiments of his own. He wanted to show that this peculiar staining was due to the madder and to no other substance, and so he began by feeding fowls on madder. He found that the bones of the fowls were coloured red.

Belchier went no further than this, and it was left to Louis Duhamel, a French squire, to show that Belchier had discovered a means of unravelling the problem of bone growth.

Belchier, however, knew about the periosteum, and he believed that it was a very vascular membrane which supplied nourishment to the bone. He also knew that bones grew like any other tissue, by the natural filling up of every interstice, and that when fractured, the ends threw out a mass of ossific callus.

In 1739 Duhamel's attention was drawn to the observations which Belchier had made. His curiosity was roused, and he determined to repeat Belchier's experiments. He fed fowls, turkeys and pigs with madder, and found that the bones, and only the bones, were stained. Further, he noticed that only certain parts of the bone were coloured, and also that the colour was deposited more readily in young bones than in old. He went further and experimented a great deal with bones and periosteum. He found that in the neighbourhood of a fracture, the periosteum became greatly thickened and served as the chief source in producing the callus.

Feeding animals with madder, he could trace the newly-formed bone and saw clearly that it was produced chiefly by the periosteum, and the stained bone was the only bone formed during the madder feeding period.

If the animal was fed for a month on madder food, and then for a similar period on ordinary food, Duhamel found that the red bone was covered over by a layer of ordinary bone, and by alternately feeding pigs in this way he was able to produce alternate rings of red and white bone. He realised now two things. Firstly, that bone was layed down in layers, and secondly, that the newest formed layer was next to the periosteum. In this way Duhamel came to consider the periosteum as the maternal tissue of bone. Here he found a difficulty. He knew that bones grew in thickness by laying down layer upon layer of bone tissue. He also noted that as the bone grew, the medullary cavity also increased in size. His explanation was that as the bone grew in thickness, the shaft cylinder also enlarged and this accounted for the increased size of the medullary cavity. To test this he surrounded the shaft of a long bone with rings of silver wire, and found, as he expected, that they had cut their way into the medullary cavity.

Duhamel's next experiment was on the growth in length of bones. He drilled two holes, a measured distance apart, in the shaft of a long bone and inserted into them small silver rods. After a definite period of time he killed the animal and again measured the distance between the holes and found it unaltered. The bone itself had grown in length, but the distance between the marks was the same. He concluded that the growth must take place at the end of a long bone.

In his work, then, Duhamel had shown four things :—

(1) That bone is only stained with madder as it is layed down.

(2) That a bone grows in thickness by the laying down of successive layers.

(3) That a bone grows in length at its extremities.

(4) That the periosteum was the mother tissue of bone.

In 1748 we find an opposition to Duhamel's views in the form of John Hunter. He was a pupil of Haller, and so was influenced by the views and beliefs of the latter. Haller believed that it was the arteries which formed bone. He could see the vessels perforating the epiphyseal cartilage, and at the end of a leash of vessels he always found an area of ossification. He could not find any evidence whatsoever to show that the periosteum had anything to do with bone growth, but believed that it was merely a limiting and nourishing membrane.

Thus two schools were formed, one which regards the periosteum as the bone-forming tissue, and the other which regards the periosteum as devoid of any osteogenetic function.

As I have said, whatever Haller said was regarded as undebatable by Hunter.

Hunter knew very well that in a fractured bone, the detached splinters retained their "vital principle," and that even when devoid of periosteum, they could survive.

To demonstrate this, he used to show a femur, from which a splinter five inches in length had become completely reversed, and yet it was firmly attached to the shaft of the bone.

He then commenced to study the changes which a bone undergoes during growth. He began his researches on the mandible, and noted that the last milk molar lay at the root of the ascending ramus of the jaw, whereas in the adult jaw room has been found for three permanent molars between the site of the last milk molar and the

ramus of the mandible. This could only be explained by the fact that bone had been layed on at the posterior border of the ramus, while at the same time bone had disappeared from the anterior border. He found that the same process takes place in the femur, and that the neck of this bone was remodelled during the process of growth. The deposition of bone on the upper surface of the neck must be accompanied by absorption of bone from the under surface of the neck.

Thus, Hunter explained the growth of bone as a dual process, deposition and absorption. On this theory he was able to explain one of Duhamel's difficulties; that was, that as the bone grew, the medullary cavity also enlarged. This was not due to an increase in the cylinder shaft, but to the absorption of bone from the interior.

To prove his theory by experiment, Hunter repeated Duhamel's experiments by madder feeding in pigs.

He fed two young pigs on madder for one month. At the end of this period one was killed while the second was fed for a month longer on an ordinary diet, after which it also was killed.

When he examined the bones, he found that what had been the condyle and posterior border during the madder-feeding period had become included in the substance of the ramus and was now buried in the new condyle and posterior border which had been formed during the non-madder period. The madder-stained anterior border had been removed by absorption. The same applied to the femur. What had been the upper surface of the neck during the madder-feeding period was now enclosed within the substance of the neck, while on the under surface of the neck, there was no deposition of bone, but every indication of absorption.

Bone, therefore, was laid down by arteries, but by what vessels was it absorbed?

Hunter performed experiments to show that the veins played no part in absorption, and so only one set of vessels remained, namely, the lymphatics.

In his study of the repair of fractures, Hunter disagreed with Duhamel. He regarded the vascularisation of the blood clot diffused between the broken ends as the first important stage in the repair by callus. The vessels were derived from the periosteum, from the surrounding tissues or from the broken ends of the bone. He observed that bone was deposited at the broken ends, but also separate deposits might be formed in the callus. Duhamel, as we have seen, believed that bone was formed from periosteum. Repeating Duhamel's experiments on the growth in length of bone, Hunter found that the distance between the holes in the shaft was increased. This is explained by the fact that the periosteum is firmly fixed at the epiphyseal line where the growth takes place, and that growth at this point causes a drag on the periosteum. This drag is greater in the upper than in the lower part of the bone, and so the holes are dragged an unequal degree towards the upper end.

We must now turn our attention to Charles White, of Manchester, who was a contemporary of John Hunter. In 1768, a boy of 14 came to the Manchester Infirmary with an abscess in the left shoulder, with pus issuing from several sinuses.

Following the routine treatment in such a case, White would have amputated the limb, but he decided to try and save it.

He cut out the upper part of the dead shaft of the humerus, and later removed a further piece of bone, making four inches in all. The arm was placed in a sling, movement being permitted.

To White's surprise, in four months, the upper end of the humerus had been reproduced and there was but one inch of shortening and the arm could be freely used. From this he concluded that the arteries of the part had the power to renew it.

In 1825, James Syme, of Edinburgh, had to treat a case of osteomyelitis of the tibia and he decided to amputate. On dissecting the limb, he found that the shaft of the bone, which was dead, was enclosed in a new stratum of bone which was adherent to and apparently formed from the periosteum.

To show once and for all that bone was formed from the periosteum, he carried out the following experiments.

He removed two inches of the radius of a dog from each leg. In the one, the periosteum was removed, whilst in the other, it was carefully preserved. Syme found after six weeks, in the bone in which the periosteum had been preserved, that the gap was filled up by new bone whilst in the other leg the gap remained. In his next experiment, he raised the periosteum from the bone, and inserted between the two a thin plate of tin foil. He found that a layer of bone was formed on the foil. Thirdly, he removed the periosteum and then covered the bone with foil. No bone was deposited because the periosteum was missing. From these experiments, we find that Syme became a convinced Duhamelite.

In 1841 we have a great step forward towards the explanation of bone formation, in the discovery of bone corpuscles by John Goodsir.

His discoveries he owed to the microscope, without which all his predecessors had had to work. At first, Goodsir believed as Hunter had done, that bone was layed down by arteries and reabsorbed by lymphatics.

He studied the growing epiphyseal line of bones and saw that the cartilage cells arranged themselves in rows. He also saw these cells in the meshes of the cartilaginous trabeculæ becoming bone corpuscles, and he traced the transformation of the primary spaces in the cartilage through successive stages until they became Haversian canals, the bone corpuscles becoming imbedded in the bone.

It was then that Goodsir conceived that these corpuscles were the bone-forming elements, and not the arteries as he had previously believed, and further than that, he thought that they also were responsible for the absorption of bone and not the lymphatics.

With the discovery of bone corpuscles Goodsir reviewed the functions of the periosteum and concluded that it acted merely as a limiting membrane, and that its apparent bone-forming power was due to the adhesion of bone corpuscles to its deep surface.

Turning now to the processes which occur in an inflammatory area of bone, Goodsir saw quite plainly that the bone corpuscles in the Haversian canals were proliferating rapidly and the canals were becoming wider and wider until adjacent canals almost met, the walls of the canals being absorbed. He saw no reason why the bone-forming cells should not change their work, and become bone-removing cells. By the proliferation of the cells the dead area of bone was separated from the living bone.

In 1857 William Ollier, a Frenchman, carried out experiments in which the periosteum was raised from the bone and turned back on itself so as to form a loop around a group of muscles. In one experiment the flap was completely removed and transplanted into the subcutaneous tissues of the thigh. In each case the periosteum produced bone, and for the first time, periosteum was used as a graft. As a result of these observations, Ollier had no doubt as to the osteogenetic functions of the periosteum.

The criticism of these experiments was that in raising the periosteum from the shaft of the bone, Ollier had also detached small pieces of bone which adhered to the deep surface of the periosteum, and it was these pieces which had produced the bone and not the periosteum.

Ollier then proceeded to make a microscopical study of the periosteum. He saw that there was a gradual change in the structure from the superficial to the deep surface. The deeper part was more cellular than the superficial, and where it actually mingled with the bone the cells were no other than bone-forming cells or osteoblasts.

Returning to his "flap" experiments, he first scraped the deep surface of the periosteum. The scrapings, when transplanted to other parts of the body produced bone. The remaining periosteum, from which the deep surface had been removed, produced no bone. This seemed conclusive that the deepest layer of the periosteum had osteogenetic properties.

Ollier then turned to bone marrow to see if it had any bone-forming powers.

He tied the main nutrient artery of a bone and found that it made no apparent difference. Grafts of bone marrow failed to produce bone, but he found that by injuring bone, he increased the osteogenetic power of the marrow.

He then amputated the foot and lower part of the tibia of a rabbit, and inserted a silver tube into the marrow cavity and between the marrow and the bone. At the end of a month he found that the tube was filled with a mass of assifying granulation tissue. This must have been produced from the marrow, and, therefore, the latter had some osteogenetic power.

Ollier concluded, therefore, that the periosteum was the all important factor. The surgeon must preserve the periosteum when excising portions of bone if the gap is to be replaced with new bone.

In 1877 William MacEwan had introduced in Glasgow a new operation for rectifying the bent tibiæ of rickety children. This he did by cutting out wedges of bone. In the following year, he had a patient in whom the entire shaft of the humerus was dead, following acute osteomyelitis. The shaft was removed, leaving only the lower epiphysis, and the upper epiphysis with a small piece of shaft. Unfortunately, the bone was not reformed. MacEwan then planted in the intermuscular furrow a row of tibial grafts. The grafts were successful, and a new humerus anatomically correct and functionally efficient was reproduced.

Thus, MacEwan demonstrated for the first time that fragments of bone could be used as grafts, and that such grafts will live and produce bone, and further, that under the influence of tensions and brought to bear by the muscles, the bone can be remodelled into a real humerus.

MacEwan repeated Syme's flap experiments, but in each case a negative result was obtained. The periosteum did not reproduce bone. The explanation must be that MacEwan in raising the periosteum from the bone had scraped away the deepest layer, that is, the osteogenetic layer.

In other experiments he studied the effects of the periosteum on the life and growth of the bone. He stripped the periosteum completely from the radius of a young dog, and found that the bone grew, but rather more slowly. He did the "ring" experiment on this bone, and found that even

though the periosteum had been removed, the ring became embedded in the bone.

We have seen that Ollier inserted a silver tube into the medullary cavity of the tibia, in order to see what bone-forming power the marrow had. MacEwan cut out a piece of the shaft of the bone, and in its place he put a piece of glass tubing opened at either end.

His idea was to find how much a bone could grow without the help of the periosteum. He found that the tube became filled with an ossifying mass. This could only have come from the shaft of the bone and not from the periosteum.

He then defined periosteum as a membrane, the function of which was to limit the excursions of the osteoblasts and to prevent them from invading the surrounding tissues.

He recorded cases where the exudate from the ends of the bones had disseminated into the surrounding muscles where ossific tissue had formed, and cases where the periosteum had fallen in between the fractured ends of the bone and prevented union.

There is one more experiment we must look at. When a piece of shaft was removed, and the periosteum left intact, the missing bone was reproduced. The prevalent idea was that the periosteum formed this bone. MacEwan, however, showed that this view was incorrect. He removed a piece of shaft of a growing dog's radius, and covered each end with a metal cap. In seven weeks the two caps had met. The bone was, therefore, replaced by a growth in the length of the shaft.

To come now to more recent work, Harris, in 1928, published an article in which he reviewed this problem of bone formation. The source of the osteoblast is still uncertain. Stump traces the cartilage cell, the subperiosteal osteoblast, the endochondrial osteoblast and osteoclast all to the same young connective tissue cells.

Fell, on the other hand, claims that chondroblasts suffer a triple fate. They may give rise to osteoblasts, to the reticulum of bone marrow, or they may degenerate and disappear.

Bast and Sullivan, on the repair of fractured bones, show that the cambium layer of the periosteum, the osteogenetic cells lining the Haversian canals, and the cells of the endostium are all active in the production of bone.

They found that the only site of production of cartilage in the repair of bones was at the cut edge of the fibrous part of the periosteum—they saw fibrous tissue cells growing to form cartilage cells.

Carey and Zeit, as a result of a study of the ossifying patella in the dog, emphasise the dua origin of the osteoblast, firstly, from the subendothelial mesenchyme cells accompanying blood vessels, and from the embryonic chondroblasts in the neighbourhood of the capillaries.

It has been found that bones are supplied by nerves which can be distinctly seen entering the nutrient foramen with the vessels. Many investigators have found that trophic changes follow section of these nerves. Such changes are loss of size and weight, diminution of inorganic material, and in growing animals, defective development.

Numerous observations have been made upon the influence of nervous lesions in man upon bone. Here again, especially in leprosy, retrogressive changes seem the rule.

In general, lesions of mixed nerves produce more bony changes than lesions of purely motor nerves, and irritative lesions of sensory nerves, as in leprosy, seem to be most potent.

Goering concludes that on clinical ground, there must be special trophic fibres of sympathetic origin passing to the bones, with corresponding spinal centres. It is claimed that there is a general controlling centre situated in the floor of the third ventricle of the brain.

I have said nothing so far about calcium metabolism and bone formation.

Gideon Wells, in his Harvey Lecture of 1911, asked six questions relating to this subject. They were :—

(1) Why is calcium deposited at all in the tissues ?

(2) Why is it deposited in some tissues and not in others ?

(3) How is calcium carried in the blood ?

(4) How is it held in the tissues where deposited ?

(5) Why is the composition of calcified deposits so constant, quantitatively and qualitatively ?

(6) What are the causes of rickets and osteomalacia ?

The answer to the first question is still obscure, but we may note that calcium is not only deposited in cartilage, but also in tumours, such as fibroids and granulomata, in tendons and in arteries.

The second question reminds us of the fact that the tissues which undergo calcification in old age are those which afford examples of vegetative reproduction, with or without mitotic division of nuclei, in relatively bloodless areas. Cartilage, of course, is such a tissue.

Distinction must be made between bone formation and calcification. The former is an active process requiring a rich blood supply. In other words, bone is a live tissue actively growing in an area richly endowed with blood. Calcified cartilage, on the other hand, is so senescent as to be virtually a dead tissue in an area relatively poor in blood supply.

As to the third and fourth questions, several theories have been put forward.

Howland, Shipley and others have stated that bone normally contains bi-calcium phosphate, that different bones in the same person have the same inorganic percentage; that the ratio of the calcium phosphate to the calcium carbonate is greater in normal than in rachitic bones, and further, that bones contain the phosphate and carbonate of calcium in the same proportion as serum.

Robinson disagrees with this, and emphasises the importance of hexose phosphoric esters. He thinks that the phosphoric esters are hydrolised by a phosphatase produced by the osteoblasts bringing about a local increase in the tricalcium phosphate concentration. This increased concentration brings about the precipitation of the calcium salts.

Howland does not think that simple precipitation explains what really happens. He regards the process as depending on the activity of the living tissue in a medium in which the concentrations of calcium and phosphate in the serum and tissue juice exceed a certain minimal value.

Attempts have been made to imitate, in colloidal solutions, the actual deposition of tricalcium phosphate and calcium carbonate.

Barillé in France and J. C. Watts in Canada concluded that the salts in bone are deposited by the activity of the osteoblasts as a secretory phenomenon.

In recent work by Morton and Stabins it has been found that when a fracture of a portion of the fibula is made in a dog, union takes place in a certain length of time. If, however, in addition to the above experiment, under exactly the same conditions, the saphenous vein is ligatured, union is delayed beyond the normal time. Whether union ever takes place has still to be seen.

A partial block, therefore, of the veins of a limb in which there is a fracture seems to cause a delay in the union of the fracture. So far, this phenomenon is unexplained.

A paper was published three years ago on the subject of the effect of inorganic salts on calcification. It was pointed out that other substances besides calcium and phosphorous affect the deposition of calcium phosphate in the tissues. For example, calcification is delayed by protein colloids, such as gum acacia.

Cultures were prepared containing calcium, potassium and magnesium carbonates, phosphates and sulphates in the proportions in which they occur in normal blood serum.

Sodium chloride was added to these solutions in varying amounts. The reaction of all the solutions was the same (pH 7.3). Slices of bone and cartilage free from calcium salts were placed in the solutions at 37°C. for 20 hours.

It was found that above a certain concentration of sodium chloride, calcification was definitely delayed. Further experiments are being carried out to ascertain the nature of the delay.

It will be seen from what has been said that there are still many points to be cleared up in regard to bone formation, and work, at the present time, is being done on the various aspects of the subject. Perhaps the most interesting of these are by Brash, of Birmingham, who has repeated Duhamel's madder-feeding experiments in pigs, and he has worked out the growth of the mandible in great detail.

The situation at the present time, I think, is that bone is formed by the activities of the osteoblast, the origin of which is uncertain, and the osteogenetic power of the periosteum is due to the presence of osteoblasts on its deep surface, and there is evidence that these cells are a differentiated part of the deepest layer of the periosteum.

Correspondence

Sir Sidney Alexander

To the Editor of the GAZETTE

SIR,—I was glad to note, in your issue of 25th January, a letter from Sir Alfred Fripp, drawing attention to the death of "S. R. Alexander," but I regret that the fact had apparently previously escaped your notice, as Sir Sidney Alexander might, in my opinion, be considered one of the most representative Guy's men of his time.

Alexander had a very good record at the Hospital, taking the London M.D., and holding the appointments of Resident Obstetric and House-Surgeon. About 1890 he settled in Faversham, where he soon made a name as a prominent member of the medical profession, and also as a keen citizen.

For sixteen years he was associated with the Corporation (though he was never a candidate in a municipal election), and in 1910 he was persuaded to accept the post of Mayor, the invitation being quite an innovation, as Alexander was not a member of the Town Council.

Faversham being a "limb" of the Port of Dover, the Mayor (as a "Baron of the Cinque Ports") was summoned to attend the Coronation

of King George in Westminster Abbey on 22nd June, 1911, and local history reports that Sidney Alexander in every respect "filled the bill!"

Re-election as Mayor continued regularly until November, 1920 when (after 10 years uninterrupted work) the now Sir Sidney sought release from the burdens of office. He had rendered conspicuous service during the entire period of the war, tackling with energy, initiative and tact, the many problems which arose, and the Town Council conferred on him the Hon. Freedom of the Borough with customary ceremony.

Servia recognised his efforts on behalf of her refugee children by conferring an Officership of the Order of St. Sava; and that of the Order of St. John of Jerusalem showed appreciation of over 30 years work for that Association.

Sir Sidney held many public offices in Faversham and the County of Kent, only recently relinguishing some of them, owing to pressure of medical work, especially the treatment of varicose veins referred to by Sir Alfred Fripp.

I hope and believe that many of his old friends will welcome this tribute to his memory.

Yours, etc.,

ROBLEY BROWNE,
Surgeon-Captain R.N. (Retd.)

Beech Grove,
Ascot.

To Hæmatologists

To the Editor of the GAZETTE

SIR,—The onward march of medical science is truly wonderful and we exiles find great difficulty in keeping pace. Your position, Sir, as Editor of the *Gazette*, marks you, although personally unknown to me, as young, keen and necessarily well versed in all its most recent developments. I, therefore, give below copy of a blood report performed at home which was recently brought to me by a patient who exhibited to my untutored eye a marked normality:—

Hæmoglobin	90 per cent.
Total Red Cells	4,480,000 per cmm
Colour Index	1.0
Total White Cells	6,400 per cmm.
Lymphocytes	21.5
Large Mononuclears	5.5
Polymorphs	72.0
Eosinophiles	1.0
Mast Cells	0.0
Myelocytes	0.0 per cent.
Total cells counted	200

Arneth Index of Polymorphs—

Nuclei per cell	1	2	3	4	5
	8	54	28	10	0 per cent.

Average per cell 2.40 (Normal = 2.76)
Coagulation Time 4 minutes
Malarial Parasites Nil.

Remarks—*Ultramicroscopic.* The feature of the slide is the considerable clumping of the particles, without, however, any great tendency to precipitation. There is marked loss of electrons, calling for oxygen subcutaneously and iodine internally

The first part of the report I find intelligible and not to differ materially from my own findings, but turning to the concluding remarks, what a tale of tragedy is unfolded! Can you, Sir, elucidate these findings in terms comprehensible to those who belong to the 1911 vintage? I must confess that it baffles me, but I have an uneasy conviction that whatever be the explanation, the electrons have it!

Yours, etc.,

J. B. HANCE,
Major I.M.S.

Office of the Chief Medical Officer,
Western India States Agency,
Rajkot.

(We are found wanting.—ED.)

University of London Union Society

To the Editor of the GAZETTE

SIR,—It has been brought to my notice that a few Guy's men recently sought admission to a Dance organised by the University of London Union Society, under the misapprehension that our Hospital Clubs' Union was affiliated to that Society.

I should like to point out—through the medium of your Journal—that while Guy's Hospital Clubs' Union is affiliated to the University of London Athletic Union, the Council has not yet considered the time ripe to seek affiliation to the University of London Union Society. Guy's men may, however, join this Society as individual members, at an annual subscription of one guinea, with an entrance fee of half a guinea.

Yours, etc.,

N. ECKHOFF,
Hon. Secretary, Guy's Hospital Clubs' Union.

Sport

Rugby

Guy's v. Aberavon

AT Honor Oak Park on Saturday, February 8th, Guy's were defeated by Aberavon by a placed goal, a drop goal and two tries (15 points) to a penalty goal (3 points). The visitors fully deserved their success, and revenged the defeat inflicted on them by the Hospital in the earlier part of the season.

Their forwards were complete masters of our pack and gained the ball in the set scrums with regularity. Working the scrum, the visitors' captain, Tal Harris, stood out by himself, and his play in this game was well up to international standard.

For this match Guy's, in their effort to find a hooker, brought Wailer the full back into the pack, and Ryan took the place of Wailer. Unfortunately, Wailer was injured in the first five minutes and had to retire just before the interval—this handicap no doubt, accounted, to some extent, for the impotency of the Guy's forwards.

From the kick-off, Aberavon swept down to our 25, and Harris obtained a clever mark, but although favourably positioned, his kick just failed to cross between the posts. For a time Guy's were penned in their 25, and eventually Harris, from a scrummage, flashed the ball to Selby, who dropped a fine goal to give the visitors the lead at the end of five minutes.

After Ryan had found touch with a well-directed kick, our threes participated in a good round of passing, but James at full back saved a dangerous situation, and after running to midfield, cleverly found touch in the corner.

From the line out, the visitors in a concerted effort, carried the ball over our line and Vickary touched down for James to convert.

Our threes made several attempts to break through, but were met with a very strong defence; however, Giesen broke through on his own, but was collared by Griffiths. Guy's were awarded a penalty, and from long range Hogbin landed a fine penalty goal.

Just prior to the interval, Harris stole away from a scrum, and after a useful run, sent in Ridgeway for an excellent try which James just failed to convert.

Guy's improved in the second half, and Giesen at once made a determined effort to get through with Morgan; unfortunately, A. J. D. Lewis was unable to hold the final pass and a possible chance went astray.

Guy's v. Cambridge University

While pressing in the visitors' half, Phillips secured the ball in a duel with Johnson, and running strongly to our 25, cross-kicked to Griffiths who touched down without opposition.

Windsor Lewis made a great save on our goal line, and running to midfield passed to Morgan, who in turn sent to A. J. D. Lewis, but the pass went astray and Aberavon pressed on our goal line.

After this, Johnson made two great efforts to race through on the wing, but on each occasion he was outweighted by numbers and no further scoring took place.

Team—D. F. Ryan; A. J. D. Lewis, J. E. Giesen, W. Guy Morgan, A. G. Johnson; Windsor H. Lewis, J. Howell; J. R. F. Popplewell, C. D. Malone, R. A. P. Hogbin, G. F. Lashmore, T. Morgan, J. S. Batchelor, J. Kunovsky, K. P. Smith.

Guy's v. Cambridge University

AFTER a thrilling and exciting game at Honor Oak Park on Wednesday, February 12th, Guy's had to admit defeat by a placed goal and two tries (11 points) to two tries (6 points).

The weather was ideal and the ground in perfect condition for a fast game when Cambridge kicked off and gained ground to our 25. At the end of three minutes Cambridge took the lead when Pope passed smartly to Collinson, who in turn, sent Carris in for an unconverted try.

This was followed by a great run through the centre by Guy Morgan, who cleverly swerved by Collinson and touched down for a try which Hogbin failed to convert.

Offside against Guy's enabled Cambridge to make ground to our goal line, which they actually crossed, but were called back for offside.

A very fine effort followed almost immediately afterwards, when Windsor Lewis raced away from a scrummage, and passing to Johnson, the latter reached the Varsity 25 before returning the pass to Lewis who ran in for a well-deserved try.

Another effort by the same two players nearly brought another score, but offside spoiled the movement.

At this period the Cambridge forwards were controlling the scrums and were very prominent in the loose, but the Guy's backs were in fine form and their defensive work was particularly good.

After Windsor Lewis had broken up a Cambridge attack, Malone, Popplewell and Hogbin made a great dribble for nearly half the length of the field, but were checked eventually in the visitors' 25.

Following a scrum ten yards from our line, Collinson created an opening for Carris, but the latter who was limping rather badly missed the pass.

Cambridge continued to press and a fine bout of passing between their threes enabled Collinson to run in for another try which was not converted.

A brief attack by Guy's was soon repelled, and following some loose play near midfield, Collinson picked up and with great speed raced through the centre to touch down near the posts for Carris to add the extra points.

Although Guy's attacked before the interval, Cambridge managed to retain their lead when the teams changed over.

From the restart, Guy's pressed through Ryan who worked his way to midfield and gave Giesen the opportunity of making plenty of ground before he was collared. Cambridge retaliated with some spirited passing between Collinson, Pope and Carris, and the latter was only stopped in the corner by Ryan.

After several scrummages dangerously near our line, Windsor Lewis made an excellent effort to get through, but was heavily tackled and badly shaken.

At this point Pope, the Varsity scrum half, had to leave the field with a damaged ankle, but this handicap did not stop Cambridge, chiefly through Brooke, Morgan and Carris, from making determined efforts to cross.

In the last ten minutes Guy's made a great recovery, and with the forwards gaining the upper hand in the scrums, our backs were seen to much greater advantage and were continually attacking, but in their excitement to get through, several good chances were thrown away through faulty passing.

Near the end a movement between Johnson and Giesen nearly brought a score, but Johnson was brought down by the Varsity full back on the line.

Team—D. F. Ryan; H. J. B. Atkins, J. E. Giesen, W. Guy Morgan, A. G. Johnson; W. H. Lewis (Captain), R. J. Eustace; J. R. F. Popplewell, C. D. Malone, R. A. P. Hogbin, G. F. Lashmore, J. S. Batchelor, K. P. Smith, J. Kunovsky, L. I. S. Campbell.

Guy's v. Old Blues

ON Saturday, February 15th, Guy's continued their series of home matches by entertaining the Old Blues, and gaining a merited victory by six goals and two tries (36 points) to a penalty goal (3 points).

Guy's were without Windsor Lewis, who had not sufficiently recovered from an injury he received against Cambridge, but T. G. Robinson was able to return to captain the side after being indisposed for three weeks.

The Hospital backs were in irresistable form and gave a perfect display of passing at top speed. This, together with Hogbin's accurate place kicking, were the chief features of a bright and open game which enabled Guy's to win by such a decisive margin.

From the start Guy's took up the offensive, but Symes stopped a rush and found touch. The Old Blues then initiated one or two clever movements, but lack of finish did not carry them far.

The first score came as the result of some fine work by Guy Morgan and T. G. Robinson, which resulted in T. Morgan rushing up to secure the touch down in the corner for Hogbin to convert with a good kick.

This reverse stimulated the visitors for a time, and twice Ryan was called upon to save dangerous situations, which he did very effectively.

Eventually, Giesen created an opening from which W. G. Morgan raced away to score a try which was not converted.

Guy's were now getting into their stride and playing with plenty of confidence and determination, another movement between Giesen, W. G. Morgan and Robinson, ended in Ryan, who was backing up well, running over in the corner, which Hogbin converted with a splendid well-judged kick from a difficult angle.

Following the interval, the visitors made desperate efforts to break through, but Guy's soon resumed the offensive and a delightful round of passing resulted in Robinson touching down behind the posts for Hogbin to add the extra points.

This was followed by a good individual run by W. G. Morgan, who scored between the posts for Hogbin to kick another goal.

The backs were full of confidence and were passing with such accuracy that another score appeared certain when a forward pass spoiled a great run.

Giesen scored the next try, after Robinson had snapped up a strong pass which enabled the former to race away at full speed to touch down in the corner.

Hogbin was responsible for the remaining ten points obtained by Guy's, by scoring two excellent tries which he also converted.

Near the end, T. N. Pearce obtained the visitors points by scoring a penalty goal from a good position.

Team—D. F. Ryan; T. G. Robinson, J. E. Giesen, W. G. Morgan, A. G. Johnson; I. K. Thomas, R. J. Eustace; J. R. Popplewell, C. D. Malone, R. A. Hogbin, G. F. Lashmore, T. Morgan, K. P. Smith, L. I. S. Campbell, J. Kunovsky.

Hospital Information, etc.

Pass List

SOCIETY OF APOTHECARIES OF LONDON

January, 1930

Surgery

*T. G. Robinson

Medicine

*C. E. P. Davies. *W. J. D'Rosario.

C. S. Skinner.

Forensic Medicine

E. Lethem

Midwifery

E. Lethem.

*Have now completed the Examination.

Papers by Guy's Men

Martin A. Rushton, M.A., L.D.S. A Cyst in the Median Palatine Suture, *Brit. Dent. Jour.*, 1930, li, 109.

M. Maizels, M.R.C.P., C. B. McArthur, M.D., and W. W. Payne, M.B. Alkalosis in Congenital Hypertrophic Pyloric Stenosis, *Lancet*, 1930, i, 286.

S. C. Lewsen, M.R.C.P. Leukæmia following Trauma, *Ibid.*, 1930, i, 288.

R. E. Smith, M.B., M.R.C.P. (1) Juvenile Myxœdema; (2) Erythrœdema Polyneuriticum, *Proc. Roy. Soc. Med.*, 1930, xxiii, 268, 269, *Sect. Stud. Dis. Childr.*, 26, 27.

The Services

Royal Naval Medical Service

J. E. Clark, Surg. Lieut.-Commander, R.N., to be Surgeon-Commander.

Change of Address

R. E. Smith, M.B., M.R.C.P., 8, Harley Street, W.1. (Tel.: Langham 2152.)

P. G. Sedgwick, Pembury House, Brighton Road, Purley.

Guy's Hospital Gazette

(ESTABLISHED 1872)

Published on alternate Saturdays. Price **9d.**

Editorial and Publishing Office:—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, **12s. 6d.** Post Free, payable in advance.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Death

PORTER—On February 13th, 1930, at a Nursing Home, Reading, Wilfred George Porter, M.R.C.S., L.R.C.P., aged 27 years.

EDS. {J. B. B. / P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *8th March* 1930 — *Number* 1086

PASSIM

THE recent edict from the House Committee for the purpose of limiting the use of proprietary preparations of drugs is the result of figures from the dispensary that might well cause those responsible for the economy of the Hospital to don their skull cups and do a little hard thinking; they might well make us ponder also for a while, bearing in mind that the Hospital pockets are as thinly lined with silver as our own.

It is only of recent years that it has become so much the fashion to use proprietary preparations for each and every occasion in preference to those of the British Pharmacopœa, and to use them with the conviction that they are superior in action. Perhaps it is the expression of a certain dissatisfaction with drug treatment in general, excepting only half-a-dozen well-proved buttresses of the physician's art, a dissatisfaction in that it is leading the medical profession, like the general public before them, to catch at every alluring statement of performance made by those anxious to sell and make quick fortunes. Perhaps the patient, as a rule, prefers pills he can talk of to his friends by high-sounding titles, tonics by appellations that read before meals are certain to inhibit the flow of gastric juices.

Perhaps there is no dissatisfaction, but just a human weakness that is only too well exploited in this age of cheap advertising. Who can fail to buy the most expensive cigarettes when depicted between the lips of the charming women of the advertisement page. In the same way who can fail to buy, and feel satisfied as to value for money, medicines guaranteed to do all they should and, at the same time, put up in forms that please both eye and palate? Surely, for most needs, drugs in the simple chemical combinations of the B.P. will answer our purpose just as well and at less expense than others now to be seen over many a bed in the Hospital. We must admit, however, that a few preparations, especially those calculated to charm that wayward goddess sleep, have proved themselves if not indispensable, at least eminently useful.

▭

ON Monday afternoon last, a short service was held in the Chapel in memory of the late Sir Alfred Fripp, whose death after a short illness, occurred on 25th February at his home at Lulworth Cove. The service was simple and one felt that it fulfilled its purpose of giving all those at Guy's who knew him, the opportunity of showing their respect for the last time.

▭

THE second prominent old Guy's man whose death it is our sad duty to announce is Mr. A. H. Tubby. Consulting Surgeon to the Westminster Hospital, the Royal National Orthopædic Hospital and the Evelina Hospital for Children, Mr. Tubby had much in common with Sir Alfred Fripp, of whom he was for a few years a contemporary at Guy's. After leaving the Blue-Coat School, Tubby came to Guy's and qualified in 1884, becoming a Fellow of the Royal College of Surgeons in 1887. His main professional interests were in orthopædics and pediatrics and he was co-founder of the "Society for the Study of Disease in Children." During the War he was Consulting Surgeon to the British Mediterranean Expeditionary Force, and later to the Egyptian Expeditionary Force, being mentioned three times in despatches and awarded the C.B. and C.M.G. Like Sir Alfred he was loved by all for his charm of manner, and possessed a peculiarly retentive memory which made him master of an inexhaustible store of entertaining anecdotes. We hope to publish an appreciation in our next number.

▭

FINALLY, we have to announce the death of Mr. Hugh Chester Bell, which occurred in most tragic circumstances on February 18th in Van-

couver. Mr. Bell was accidently poisoned while working in his laboratory. He was Demonstrator in Chemistry at Guy's from 1921—1926.

It is with justifiable pride that we have to bring to the notice of our readers the date of the Final Round of the Inter-Hospital Rugby Football Cup between Guy's and Bart.'s on March 19th, at 3 o'clock, on the ground at Richmond. The Cup has been held since 1927 either by Bart.'s or ourselves, and we wish the team every success in their efforts to retain it this year. We hope that the evening of Wednesday, March 19th, will find the College hoarse and speechless, and the fifteen victorious.

The attention of the enthusiastic supporters of Guy's Boxing we would call to two forthcoming contests. The first, the Inter-Hospital Boxing Competition takes place at the Hoxton Baths (Old Street Station), on Friday, 14th March, at 7.30 p.m.; tickets 8s. 6d., 4s. 9d. and 2s. 4d. each, may be obtained from the Hon. Secretary, Boxing.

The second is in aid of the Hospital and the Film Artistes' Guild Club, when Guy's meets a team of British film actors on Tuesday, April 1st, at 7.30 p.m., at the Stadium Club, 85, High Holborn. In addition a number of exhibition bouts will be given. Tickets are priced as follows: Ringside, £1 1s. 0d. and 10s. 6d.; Seats, 5s. 9d., 2s. 6d. and 1s. 6d.; they may be obtained from the Appeal Office, Guy's Hospital.

Obituary

SIR ALFRED DOWNING FRIPP, K.C.V.O., C.B., M.S., F.R.C.S.

THE death of Sir Alfred Fripp at the early age of 64, which occurred at his home at Lulworth Cove, Dorset, on Tuesday, February 25th, 1930, entails to Guy's the loss of an ardent friend, a respected personality, a lucid teacher, a brilliant operator, and a Governor, whose kindliness and benefaction was enjoyed by all who came into contact with him and extended to many who, in later years, had not the opportunity.

Born at Blandford, Dorset, on September 12th, 1865. Alfred Downing Fripp inherited from his grandfather a love for art, which later was to lead to the compilation of his best known publication, "Anatomy for Art Students."

Alfred Fripp entered Merchant Taylors' School in 1879, during the headmastership of Dr. William Baker, shortly after the removal of the School to its present site in Charterhouse Square from Suffolk Lane. There he developed his love of sport and figured in the School Cricket XI for three successive seasons from 1881–1883. He was also a keen Rugby footballer.

In 1883, Fripp came to Guy's to study medicine; he became a Member of the Royal College of Surgeons in 1889, in which year he also graduated in the University of London, taking the M.B., B.S. degrees. Continuing his studies Fripp became a Fellow of the College in 1893, and later in the same year, took the degree of Master of Surgery in the University. During these years he had acquired not only a love for learning, but also the art of imparting knowledge to beginners.

Throughout his student days he played a prominent part in Hospital athletics figuring in both football and cricket teams for a number of years, and taking part in the first cricket match played on the Clubs' Union Ground at Honor Oak Park in 1894.

His medical practice was distinguished from the first; as a locum tenems in general practice in York, he was called upon to treat the late Duke of Clarence for a dislocated ankle which he sustained whilst stationed in the City with his regiment, the 10th Hussars.

In 1897, Fripp was elected Assistant Surgeon to Guy's Hospital, and attended King Edward VII when, as Prince of Wales, he fractured his patella in 1898.

The South African War saw Fripp transferred to a fresh seat of activity, and as Chief Civil Medical Officer to the Imperial Yeomanry he wrote a series of critical letters on medicine in the field, afterwards published under the title, "Letters from South Africa on Military Hospital Administration during the Boer War"; he was mentioned in despatches, and in 1903 he was created C.B. and a Knight of Grace of the Order of St. John.

In 1906 he was made Knight Commander of the Victorian Order and appointed Surgeon-in-Ordinary to King Edward, and to the Duke of Connaught, which office he retained into the reign of King George V.

SIR ALFRED DOWNING FRIPP, K.C.V.O., C.B., M.S., F.R.C.S.

In 1908, Sir Alfred became Surgeon to the Hospital and Lecturer in Surgery to the Medical School, offices which he filled until he became a Governor and Consulting Surgeon upon his retirement in 1925.

During the Great War he served as Consulting Surgeon to the Royal Navy, as a Member of the Advisory Board of the Army Medical Service, and as a Member of the Council of the National Red Cross Society.

During his lifetime Sir Alfred maintained an active interest in all the sporting activities of the Hospital, but in particular in the affairs of the Swimming and Football Clubs. The former owes its inception to him, and for the latter he first obtained many of the annual fixtures with other first-class clubs.

Away from the Hospital, Sir Alfred concentrated his activities upon benefactions, his pleasures upon the theatre, and found relaxation, when at leisure in his beloved home-county, in swimming, a sport in which his whole family excel.

He was a prominent member of the Visiting Committee of King Edward's Hospital Fund for London, and of the Councils of the Hospital Saturday and Hospital Sunday Funds, and his industry as No. 1 of the Froth Blowers is well known to medical and laymen alike.

Though he was a man of so many and varied activities, so close, so enthusiastic and so sympathetic was the interest he took in each that he inspired in everyone with whom he came in contact a love and appreciation which will cause his memory to be honoured as his presence was always respected.

▭

A letter of personal appreciation from Sir Cooper Perry :—

DEAR SIR,—I feel that I owe it as a tribute to our long friendship that I should write something in the *Gazette* in memory of Alfred Fripp.

The obituary notice of him in *The Times* and in your own columns give the main facts of his life. Here I merely deal with personal matters, of which I am able to speak from closer knowledge than anyone outside his own family.

I first came across Fripp when, as a student, he was a patient of mine in the old Clinical Ward, suffering from tonsillitis, with a particularly high temperature, which for some days gave ground for anxiety. It was then that I made the acquaintance of his mother, and it was at once plain how deep was the love they bore each other.

Fripp was in fact an admirable son, brother and husband, and his life was rooted in his deep domestic affections. Amid all the buffetings of circumstances—and his ship sailed often in troubled waters—he would always return to the safe harbour of his home and his friends. He loved nothing so much as to talk of his wife and his sons and his daughters, and last time I met him he told me with the greatest pleasure that his younger son was at the school at which, some sixty years ago, I was myself.

My next recollection of Fripp was when he had done his appointment as House-Physician—he was never a House-Surgeon—and was thinking what to do next. It happened that there was a vacancy for a Demonstrator in the Dissecting Room, and I recommended him to apply for the post. He got it, and did very well, teaching his men effectively towards passing their examinations, and not disdaining the use of " tips," a word which the writers of a Residents' Play of the period discovered made the appropriate jingle of " Tips of Fripp's."

It was whilst he was in the Dissecting Room, and in the vacation doing a locum for the late Dr. Jalland, of York, that he was called in to attend on the late Duke of Clarence, and it was then that he came into contact with the Royal Family and was honoured by the warm friendship of King Edward VII.

Few surgeons can ever have risen to Royal favour, fame, and practice, so rapidly as Fripp, and still fewer can have remained less spoilt by success. It was by what seemed sheer bad luck that he did not operate upon King Edward, when he was struck down by appendicitis. Sir Frederick Treves took his place, and whilst Fripp remained to the end a Surgeon to the King, he withdrew more and more from Court life and threw his energies into all sorts of good causes, and sometimes into enterprises into which he seemed to be led more from good nature than sound judgment.

And this leads me on to say that Fripp never seemed to be a good judge of character. His swans were apt to be geese and not even first rate geese at that, and if he came to me with a scheme for reorganising anything in the Hospital or Medical School, it generally turned out that the scheme was proposed with some particular man in view. First the man and then the scheme, and not first the scheme and then the man to fit into it.

As a teacher Fripp was, so far as I know, not so much appreciated by students as several others amongst his colleagues. In the first place, he was unpunctual almost as consistently as others are punctual.

His range as an operator was thought to be somewhat narrow, and his teaching did not help greatly for examinations. On the other hand, whatever operation he did, he did perfectly, and with such attention to detail as won the respect and admiration of the Sisters and Nurses and of any man who wanted to know just how to handle a case in private practice.

And this leads me to say that Fripp was seen at his best in dealing with his patients, and what is even more difficult his patients' friends. He never left the unpleasant interview to be faced by the Sister; for he had not finished with his patient, when he had done the operation. He saw things through, either for recovery or otherwise.

I myself often used to meet him, when he was calling at the Superintendent's Office to choose with Miss Huggett the best Convalescent Home for some particular case.

But I must not trespass, Mr. Editor, much more on your good nature. There still remain, however, two matters which have, I think, hardly received adequate notice in such obituaries as I have read, but which I am sure Fripp would regard as amongst the most important points in his eventful life.

His experience in South Africa, when he was with the Imperial Yeomanry Hospital, convinced him in his early days that things were not well with the medical service of the Army. On his return home, he used all the influence he possessed with those in authority to secure the appointment of a Committee to make recommendations to the Secretary of State for War for the complete reorganisation of the Royal Army Medical Corps and the Army Nursing Service.

Such a thorough reform as was then effected could not be the work of a single man or a single mind, but no civilian physician or surgeon had a larger share in the achievement than Fripp. The removal of the Army Medical School from Netley, the building of the Royal Army Medical College with its laboratories at Millbank, and the establishment of the Advisory Board for Army Medical Services, on which he himself served for some years, remain to remind us of what he did in this field of endeavour.

It is only a few months ago since Fripp contributed to the columns of *The Times* an appreciation of the services rendered by Sir Cosmo Bonsor to the Hospital of which he for so many years was Treasurer and President. Modesty prevented him from saying anything of his own work, but it is only right that I should make mention of what Fripp himself did for Guy's, not only at the time of the Great Appeal in 1896 for a Re-endowment Fund which, inaugurated by King Edward VII, when Prince of Wales, now stands at more than half a million pounds, but throughout the whole of his subsequent career. It would be invidious to specify individual donations and subscriptions directly attributable to his influence, but it may be stated with absolute certainty that, whilst as a place of learning and research Guy's owes everything to the long line of distinguished Physicians and Surgeons who have been attached to it, there has been no Physician or Surgeon on its Staff to whom in material things so much is owing by his old Hospital and Medical School as to Sir Alfred Fripp.

Yours very truly,
E. C. PERRY.

WILFRED GEORGE PORTER, L.R.C.P., M.R.C.S.

THE tragic news of the death of Wilfred Porter at the early age of 27, comes as a great shock to his many Guy's friends. It appears that he contracted a streptococcal septicæmia, and, though putting up a gallant fight, succumbed after five days' illness.

Porter entered Guy's in 1920, qualifying with the Conjoint in January, 1926. From Guy's he went as Resident Medical Officer to the West Hertfordshire Hospital, Hemel Hempstead, and thence to the post of House Physician to the Queen's Hospital for Children, Bethnal Green. His keen and conscientious work rapidly gained him golden opinions among the hospital staffs, and his kindly and cheerful disposition made him a popular figure among his contemporaries at Guy's and in his subsequent hospital appointments.

In 1928, he married Dr. Eleanor Burdett, a former colleague at the Queen's Hospital for Children, and started general practice in a partnership at Pangbourne, where they soon became much loved and appreciated. Continuing his interest in ear, nose and throat work, he was also acting as assistant in that department at the Royal Berkshire Hospital, Reading.

Keen on athletics, in spite of a lame leg, he played an excellent game of tennis, and was an enthusiastic member of the Pangbourne Cricket Club.

The general sorrow and respect manifested locally at his death showed that in this short time his sterling qualities had established him as a practitioner after the best traditions of Guy's.

Our sincere sympathy goes out to his widow and his parents in their great loss.

Duodenal Ileus

A Clinical Lecture delivered at Guy's Hospital, by R. P. Rowlands, Esq., M.S., F.R.C.S.

GENTLEMEN,—For many years, surgeons and pathologists had noticed dilatation of the duodenum without recognising its true significance, until L. A. Petit,[1] in 1900, suggested that it was due to compression of the third part of the duodenum by the root of the mesentery.

Bloodgood,[2] Codman,[3] Stavely,[4] Wilkie[5] and Hurst,[6] have contributed much to our knowledge of this condition which may be *acute*, *chronic* or *recurrent*.

Severe or recurrent attacks of bilious vomiting should lead us to think of duodenal ileus and drive us to make the necessary radiographic examinations. Explorations of the abdomen are no longer complete unless the duodenum has been thoroughly examined for this condition.

As a result of obstruction of the third part of the duodenum, the upper parts dilate, the pyloric sphincter may become incompetent, and the stomach greatly distended. Chronic, incomplete or intermittent obstruction may culminate in complete or acute obstruction at any time, especially while the patient is lying supine in bed and is constipated after operation, when traction by the loaded and congested bowel upon the short root of the mesentery is greatly increased. Acute dilatation of the stomach is nearly always secondary to duodenal ileus, an illness or an operation, especially upon the stomach, having upset a precarious balance; "vicious" circle is sometimes due to the same cause.

Chronic duodenal obstruction often leads to ulceration and even to perforation of the duodenum or stomach. Dorrance and Deaver[7] recorded a case in which such a duodenal ulcer perforated three times, and Wilkie has related several very interesting examples of duodenal ulceration with and without perforation complicating duodenal ileus.

ETIOLOGY.

The third part of the duodenum crosses the lumbar spine behind the root of the mesentery, and at this spot it lies in the angle between the aorta and the superior mesenteric vessels, which if dragged upon, compress the bowel. It is the superior mesenteric artery which usually presses upon the duodenum, but the ileo colic, right or even the middle colic, may be the active agent.

Sometimes the mesentery is so short that the weight of the mobile right colon and small intestine hanging down into the pelvis so drags upon the root of the mesentery as to compress the duodenum. Often it is difficult at operation to relieve this pressure by lifting the bowels from the lower abdomen, where they are gripped by a tight abdominal wall.

Inflammation and swelling of the root of the mesentery may produce the same result. Such inflammation may spread from a recent gastro-jejunostomy, but more commonly it is due to simple or particularly to tuberculous inflammation of the mesenteric glands. Similarly it may be due to primary or secondary growth in these glands.

A congenitally low position of the third part of the duodenum hinders drainage and predisposes to duodenal ileus. Developmental bands may also compress and obstruct the duodenum.

DIAGNOSIS.

In all obscure cases of epigastric pain with vomiting coming on in attacks, duodenal ileus ought to be considered.

Radiographic examination after an opaque meal may show dilatation of the duodenum with reverse peristalsis in the dilated part. As a rule, repeated examinations are necessary to clinch the diagnosis. Reverse peristalsis, without dilatation is not sufficient evidence of duodenal ileus, for it may occur in the absence of obstruction, especially in hysterical patients.

In many cases, duodenal ileus has been mistaken for appendicitis and the appendix has been removed without relief. It is important also to remember that gastric and especially duodenal ulceration may be secondary to duodenal ileus. Under these conditions, medical treatment is difficult and not likely to be permanently successful, while a gastrojejunostomy, although it may afford temporary relief, may, on the other hand, be followed by so-called vicious circle or acute dilatation of the stomach. It is, therefore, important in all cases of gastric or duodenal ulcer to look for evidence of duodenal ileus while examining the patient radiographically, and particularly during any subsequent operation to examine the third part of the duodenum very carefully. This is all the more important when there is dilatation of the first and second part of the duodenum.

Dilatation of the third part of the duodenum is not always evident in cases of genuine duodenal ileus; it depends upon the amount of distension of this part at the time of the examination.

Under ether anæsthesia, as pointed out by Lord Moynihan,[8] swallowed ether may vaporise and so distend a normal duodenum as to cause simulation of duodenal ileus. D. P. D. Wilkie,

when in doubt during an operation, passes a stomach tube and inflates the stomach and duodenum, but even this may mislead.

Thickening and sagging of the peritoneum in front of the third part of the duodenum, just to the right of the spine and below the transverse mesocolon, is very suggestive of duodenal ileus, and when this peritoneum is incised, the bowel may be seen to be surprisingly dilated and hypertrophied.

Examination of the root of the mesentery, especially by passing the finger behind it, may demonstrate pressure upon the duodenum and perhaps inflammatory thickening or calcified glands may be noticed.

In the diagnosis, the most important thing is to examine the patient radiographically during an acute attack, if possible, but this may be made difficult by persistent vomiting, so that much patience and perseverance are required in the examination. After the abdomen has been opened, and thoroughly explored, careful examinations of the third part of the duodenum and of the root of the mesentery usually allow a correct diagnosis to be made, but much experience and judgment are necessary to prevent mistakes.

TREATMENT.

The treatment of simple duodenal ileus is easy, safe and satisfactory. Duodeno-jejunostomy is nearly always the operation of choice, and is attended by a very small risk and followed by excellent results in practically all cases when the diagnosis is correct and no other cause of vomiting has been overlooked. The anastomosis is made between the jejunum, about four inches below its origin, and the front of the third part of the duodenum as it lies to the right of the lumbar spine. The peritoneum in front of the bowel is incised in a bloodless area. The duodenum is mobilised, brought forward, clamped and joined to the jejunum after the manner of gastro-jejunostomy.

In some cases, traction upon the root of the mesentery by a prolapsed, rotated and distended cæcum may be overcome by fixing the cæcum at a higher level, either by sutures or better by making a temporary cæcostomy.

A more radical method in some of these cases associated with chronic or recurrent volvulus of the cæcum, is to resect the cæcum and ascending colon and to implant the proximal end of the ileum into the transverse colon.

When duodenal ileus is complicated by duodenal or gastric ulceration, the choice of operation is somewhat difficult. In the absence of pyloric, stenosis duodeno-jejunostomy should suffice if followed by careful medical treatment. Gastro-jejunostomy has been satisfactory in some cases, but it may make matters worse when the obstruction of the duodenum is severe, and under these circumstances it may become necessary to add duodeno-jejunostomy, either at the time of the original operation, or subsequently for the correction of the so-called "vicious circle."

In all cases of vicious circle with acute dilatation of the stomach, which have failed to respond to gastric lavage and suction, duodeno-jejunostomy is an alternative to entero-anastomosis, and it may be easier and far more effective than the latter operation. It is clear that entero-anastomosis cannot relieve vomiting due to duodenal ileus because the anastomosis is distal to the obstruction.

In some instances where duodenal ileus is complicated by duodenal or gastric ulcer, or both, partial gastrectomy appears to be the simplest and safest method of overcoming all the difficulties, and I have found it very successful in several cases, such as Case 1, and another case of a large gastric ulcer upon the lesser curvature, which was published in the *Guy's Hospital Reports* (Case 4).

Sometimes, when the obstruction of the duodenum is very severe or complete, partial gastrectomy will not suffice, and duodeno-jejunostomy must be added to drain away the pancreatic juice and bile from the duodenum.

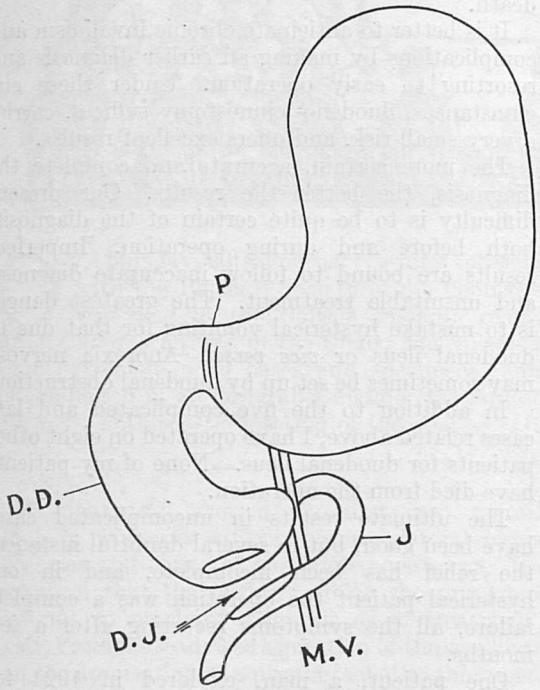
Case 1.

F. E., aged 21. *Duodenal ileus, duodenal ulcer, gastric ulcer. Partial gastrectomy. Recovery.*

Dr. Hurst[9] at New Lodge Clinic, had diagnosed gastric ulcer, duodenal ulcer and duodenal ileus, which caused attacks of obstruction relieved by adopting the prone position with the pelvis raised. The gastric ulcer had done well for a time under medical treatment, but had recurred. It was thought that the duodenal ulcer was healing. The X-ray shadow showed a definite crater on the lesser curvature of the stomach, about two inches from the pylorus, and some deformity of the duodenum and definite duodenal ileus. The appendix had been removed.

Operation, 1st March, 1926. The diagnosis was confirmed in every particular. Partial gastrectomy was performed and the jejunum anastomosed to the cut end of the cardiac remainder of the stomach, after the Polya - Balfour - Moynihan method. The part removed comprised the pylorus, half of the stomach and the first part of the duodenum. The crater of the gastric ulcer was the size of a sixpenny piece; the duodenal ulcer was almost healed and was on the anterior wall of the duodenum, close to the pylorus. The duodenal ileus was due to compression by the root of the mesentery, with no evidence of disease or glandular enlargement there. Nearly four years

later the patient wrote " that the results have been extraordinarily good in every way. I have no indigestion, and both physical and mental stamina have improved out of all recognition."



Duodenal Ileus (modified from A. F. Hurst).

P., Pylorus D.D., Dilated Duodenum. M.V., Mesenteric Vessels compressing the Duodenum. D.J., Duodeno-Jejunostomy openings.

CASE 2.

Mr. K., aged 50. *Duodenal ileus, duodenal ulcer, gastro-jejunostomy. Recovery.*

For many years the patient had attacks of indigestion with vomiting. These became much worse in November, 1928. There was no history of hæmatemesis or melæna. The patient was losing flesh rapidly and was sent to New Lodge Clinic for investigation. There he developed several attacks of vomiting, with hæmatemesis and melæna. Duodenal ulcer and duodenal ileus were demonstrated by radiographic examination, and there was also a suspicion of gastric ulcer.

Operation, 27th March, 1929. A very large, adherent duodenal ulcer was found, occupying nearly the whole of the first part of the duodenum and invading the pylorus and causing stenosis. There was also a posterior ulcer, deeply invading the pancreas, which was much fibrosed. The gall-bladder and ducts were normal. The appendix was chronically inflamed, high up, and was removed. There was no gastric ulcer. The duodenal ileus was confirmed, but the third part of the duodenum was now so empty that the ileus could easily have been overlooked, although the peritoneum covering it was saggy and had been stretched. There was definite compression of the duodenum by the root of the mesentery, which contained enlarged glands, some of which were calcified.

Posterior gastro-jejunostomy was performed with some difficulty, owing to adhesions on the back wall of the stomach. A long incision was made near the lower border of the stomach. The jejunum was not reversed; the opening in it began 3 inches from the end of the duodenum. Then duodeno-jejunostomy was performed 3 inches further on in the jejunum, the opening being 2 inches in diameter. The duodenum at the site of the anastomosis was dilated and hypertrophied.

The patient did very well and gained weight rapidly. He was well in February, 1930.

CASE 3.

W. K., aged 36. *Duodenal ileus. Duodenal ulcer with stenosis. Gastro-jejunostomy and duodeno-jejunostomy. Secondary jejunal ulcer. Death.*

A man, having suffered much from indigestion, was admitted to New Lodge Clinic in June, 1927, and shown to have a large stenosing duodenal ulcer, with duodenal ileus.

Posterior gastro-jejunostomy, and duodeno-jejunostomy were performed.

Having done well for 18 months, the patient developed a gastro-jejunal ulcer, and died soon after an operation in Ireland in the summer of 1929.

It is probable that partial gastrectomy would have been better for this patient, perhaps preventing jejunal ulceration by lowering the gastric acidity. Duodeno-jejunostomy alone would neither do this nor overcome the duodenal stenosis.

CASE 4.

H. H.,[10] aged 29. *Duodenal ileus. Secondary gastric ulcer and partial gastrectomy. Recovery.*

A man was admitted to Guy's in September, 1925, for a very large, painful gastric ulcer, high up upon the lesser curvature of the stomach, which had failed to respond to medical treatment. There was well-marked duodenal ileus.

Therefore, partial gastrectomy was performed, and the result was very satisfactory.

CASE 5.

Mr. B., aged 50. *Duodenal ileus overlooked for 25 years temporarily relieved by gastro-jejunostomy, ultimately cured by duodeno-jejunostomy.*

From the age of 25 had suffered from attacks of indigestion, severe epigastric pain and vomiting. When he was 30, a gastro-jejunostomy was performed for a greatly dilated stomach, without

any evidence of gastric or duodenal ulcer, or pyloric stenosis.

He was very much better for five years, when the attacks recurred, and continued on and off for 10 years, when at the age of 45 a gastro-jejunal ulcer was suspected and the gastro-jejunostomy was disengaged, but no gastro-jejunal ulcer was found. The appendix was removed at the same time.

The attacks became more frequent and severe after this operation, and the patient gradually lost about 4 stone in weight and had to give up his work as a dental surgeon.

A radiographic examination was made early in March, 1929, and showed a very greatly dilated stomach, in which the opaque meal remained for over 24 hours.

I first saw him early in April, 1929, and he was admitted into Bright Ward early in May, where another radiographic examination confirmed the great delay in the stomach. No evidence of duodenal ileus was noticed at either radiographic examination. There was marked subchlorhydria.

At the operation on May 7th, the stomach was found greatly dilated and rather thick-walled. It was very adherent behind and at the site of the old posterior gastro-jejunostomy. The pylorus and duodenum were so embedded in adhesions that it appeared to be impossible to examine them properly. There were many adhesions also about the upper coils of the jejunum. A new and large posterior gastro-jejunostomy was performed with great difficulty, but this failed to function properly in spite of perseverance with lavage and suction.

Subsequently, when the patient was terribly emaciated, a radiographic examination by Dr. Lindsay Locke showed that no food given by the mouth travelled down the small intestine. The stomach was greatly dilated and for the first time duodenal ileus was noticed, food surging back and fore between the pyloric segment of the stomach and the third part of the duodenum. Therefore, on the 9th July, duodeno-jejunostomy was performed with considerable difficulty ; the duodenum was greatly dilated, thick-walled and inflamed.

From this date, the patient made a slow but good recovery, and four months later was better than he had been for many years.

It is interesting that radiographic examination on several occasions did not reveal the real cause of trouble in this case. The very large stomach probably concealed the duodenal ileus lying behind it.

PROGNOSIS.

Without operation, the ultimate outlook for the subjects of duodenal ileus is bad. The attacks become more frequent and more severe, wasting and even extreme emaciation[11] and death may ensue. Complications, such as acute obstruction, duodenal or gastric ulceration with hæmorrhage or perforation follow in many cases, and may lead to death.

It is better to anticipate chronic invalidism and complications by making an earlier diagnosis and resorting to early operation. Under these circumstances, duodeno-jejunostomy suffices, carries a very small risk, and offers excellent results.

The more certain, accurate and complete the diagnosis, the better the results. Our present difficulty is to be quite certain of the diagnosis, both before and during operation. Imperfect results are bound to follow inaccurate diagnosis and unsuitable treatment. The greatest danger is to mistake hysterical vomiting for that due to duodenal ileus or *vice versa*. Anorexia nervosa may sometimes be set up by duodenal obstruction.

In addition to the five complicated and late cases related above, I have operated on eight other patients for duodenal ileus. None of my patients have died from the operation.

The ultimate results in uncomplicated cases have been good, but in several doubtful instances the relief has been incomplete, and in one hysterical patient the operation was a complete failure, all the symptoms recurring after a few months.

One patient, a man, explored in 1924 for duodenal ulcer, was found to have definite duodenal ileus, but no evidence of duodenal ulcer could be found. Duodeno-jejunostomy was performed, and seemed to be successful, but the symptoms recurred two years later, with severe melæna. It is probable that this man suffers from recurrent acute duodenal ulcers, which the duodeno-jejunostomy has failed to prevent. He now keeps fairly well upon a careful diet.

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(8) Lord Moynihan, *Abdominal Operations*, Vol. 1, p. 444.
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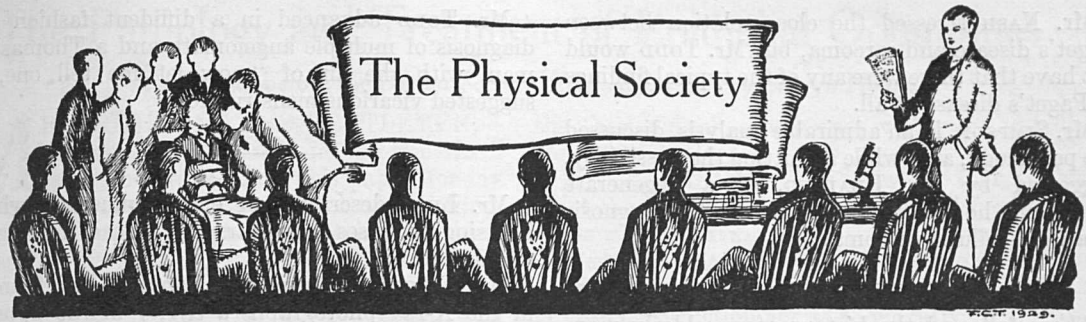
(10) A full account of this case was published in the *Guy's Hospital Reports*, 1926, Vol. 76, p. 158.
(11) See picture of Petit's patient in Lord Moynihan's *Abdominal Operations*, Vol. 1, p. 441.



ON Thursday, 20th February, a joint meeting with the Physical Society of St. Thomas's was held in the College smoking room. Mr. J. CROOT, who was in the Chair, had collected some extremely good cases and specimens, and he conducted in an admirable manner the largest and most enthusiastic meeting of the year.

Mr. READING showed the first case, a frail old lady who was suffering from bilateral psoas abscesses and caries of her lumbar vertebræ. He remarked that the problem which she presented was not so much of diagnosis as of treatment.

Mr. FERGUSON advised aspiration of the swellings and the application of a plaster jacket to the spine. In his opinion, operative interference here would be useless.

Mr. ECKHOFF remarked on the increasing rarity of surgical tuberculosis in hospital practice.

Mr. RICHARDS advised a diagnostic aspiration as he was not convinced of tuberculosis of the spine.

In reply to Mr. K. M. ROBERTSON (St. Thomas's), Mr. READING replied that there were as yet no evidences of amyloid disease or of damage to the cord, and that no treatment could be satisfactorily carried out, as she was such a perverse old lady.

Mr. SHONE then told the story of another elderly lady, who had gradually developed numbness of the right lip and dysphagia and who could no longer wink her left eye. He showed also a most baffling X-ray photograph of her chest, and, after reassuring Mr. ROBERTSON (St. Thomas's) that her Wassermann was negative, he had to admit, to Mr. ECKHOFF'S somewhat diffident question, that a blood count had not been done. This proved to the meeting that Mr. SHONE was only human after all, and one after another questions were fired at him—gastric function?—urine?—temperature? and Mr. LEES even wondered if he had examined her eyes.

Mr. SHONE told us about these investigations—he had done them all and they were negative. In a manner worthy of Sherlock Holmes himself he drew our attention to a small supraclavicular gland, a clue which no one had considered. To him the case was merely a growth in the superior mediastinum with multiple metastases in the meninges. Most of us were by now feeling like Dr. Watson in one of his duller moments, but Dr. HAMPSON restored some of our shattered self-respect by harping on the deplorable lack of a blood count.

We next listened to the story, which Mr. TAYLOR told us, of an old man, who had pain and swelling in the right thigh, a dome-shaped skull, and a very positive Wassermann reaction. After three visits to the Light Department, his right femur broke and he developed uræmia. Having thus accompanied us to the nearer bank, Mr. TAYLOR left us and Mr. SIMPSON took up the tale on the other side of the Styx.

The patient was found to have leontiasis osseum, while in the interior of the right femur, which showed thickening and a spontaneous fracture, there was a grey, necrotic mass. The prostate was hypertrophied and both lungs were solid from pneumonia, the right lung also showing three intriguing nodules of new growth. Mr. SIMPSON briefly described the microscopic features of the various lesions, and left the meeting to offer an explanation.

Mr. SHONE, confessing by his manner that he did not like to cast pearls before swine, explained the process as being venereal from A to Z, and though he was aware that 10 per cent. of cases of Paget's disease developed a sarcoma, he did not think that this man had either Paget's disease or a sarcoma. Mr. LEES, astonished at the simplicity of the case, agreed with him and drew a highly edifying picture of the fruits of vice.

Mr. SHONE then fought a losing fight with Mr. SIMPSON over the meaning of hyperchromatism and metaplasia.

Mr. NASH stressed the close relation between Paget's disease and sarcoma, but Mr. TODD would not have that there were any of the typical findings of Paget's disease at all.

Mr. SIMPSON, in an admirable analysis, discussed the pathology, and, while admitting the possibility, suggested by Mr. READING, of a degenerate carcinoma, he was inclined to favour the diagnosis of a fibro-cellular sarcoma.

There followed the history of an elderly man, from whose leg a malignant ulcer had been excised a year ago. Multiple tumours, believed to be sarcomatous, had appeared under his skin and radium had been applied with great effect, as the photographs, which Mr. BERKELEY showed us, admirably testified.

Mr. ECKHOFF drew our attention to the remarkable regression of these tumours under radium, but he admitted that a similar nodule on the larynx had apparently disappeared without any treatment, and he was not quite confident that the diagnosis of sarcoma was justified.

Mr. KAHAN (St. Thomas's) described a similar case, in which lymphosarcoma was eventually proved to be responsible.

Mr. ROBERTSON (St. Thomas's) expressed the view that, though radium may destroy the primary focus, the disease was more prone to spring up in other parts of the body.

Mr. READING asked whether a blood count had been done as similar nodules sometimes appeared in lymphatic leukæmia. Dr. HAMPSON supported the possibility of this view, but he pointed out that the tumours had not the typical appearance of those in leukæmia.

Mr. ECKHOFF, in reply, stated that leukæmia had not been considered, and that in the near future, steps would be taken to settle the diagnosis.

Mr. ROSENBERG described a boy who, after intermittent bleeding from various sources, was admitted for melæna. His blood was normal, except for a low platelet count and he had no history of bleeding amongst his ancestors.

Mr. SILVERSTONE, on the low platelet count, suggested purpura and advised splenectomy.

Mr. COLBECK countered this with a suggestion of the intermittent thrombocytopenia of Wehrloff.

Mr. BATEMAN (St. Thomas's) thought that there was nothing amiss with the patient but the diagnosis, while Mr. WILSON PEPPER (St. Thomas's) recounted the miraculous effects of splenectomy upon the bleeding in thrombocytopenia. In this he was fully supported by Dr. HAMPSON.

Mr. TODD advanced in a diffident fashion a diagnosis of multiple angeiomata and a Thomas's man, with the air of "now let me tell one," suggested vicarious menstruation.

Mr. LEES described an elderly musician who had singing noises in his ears and a head too large for his hat.

Mr. WILSON PEPPER (St. Thomas's) had found in the X-ray photographs a cavity in the upper end of the humerus, and queried the diagnosis of Paget's disease which had been put forward.

Mr. SHONE explained the singing noises as being due to pressure on the endolymph, although someone had suggested wax in the ear.

Mr. BRUCE-PEARSON asked why the patient was deaf. This started a long discussion which was only ended when Mr. LEES explained that he was not deaf.

Mr. SHONE, slightly out of breath, told us of an elderly man, who had painless vomiting, and recited rapidly a long list of laboratory findings. The most important of these were positive Wassermann reactions in blood and cerebrospinal fluid, and he diagnosed tabes with atypical gastric crises.

Mr. ROBERTSON (St. Thomas's) asked whether there were any definite signs of anæsthesia, and Mr. COHEN asked what made the man vomit.

Mr. SHONE replied in effect that he vomited because his stomach contracted.

Mr. ROBERTSON insisted on a definite answer to his question and Mr. SHONE had to admit that there was no anæsthesia. At this, several Thomas's men asserted that they had driven pins into the patient's breast bone without causing him the slightest discomfort; and they all expressed the view, that, though there might be tabes, the patient showed no traces of gastric crises, typical or atypical.

Asked whether he had anything to say, Mr. SHONE replied "This is an atypical case of gastric crises."

This was the last case and Mr. ROBERTSON, seconded by Mr. GAYDEN, thanked the Chairman for the skill with which he had selected and arranged his cases. Mr. CROOT, in declaring the meeting closed, expressed the pleasure of the Physical Society in entertaining so many visitors from St. Thomas's.

P. V. R.

The Pathology and Treatment of Epithelial Odontomes

A Paper read before the Dental Society, February, 1930, by Selwyn Holms.

MR. PRESIDENT AND GENTLEMEN,—I claim no originality in the remarks I am about to make in this paper, for my practical experience of this subject is very limited, and the facts put before you this evening have been collected only by a study of the literature on the subject, and by the kind help given to me by many authorities in allowing me to ply them with questions.

The title of this paper, "Epithelial Odontomes," concerns the three cysts, multilocular, dentigerous and dental, as classified by the British Dental Association "Report on Odontomes," by Gabell, Warwick James and Lewin Payne. In this report the cysts are listed in the above order for chronological reasons, multilocular cysts beginning to form while the tooth involved is in its primitive state, dentigerous cysts forming during the period of eruption, and dental cysts forming in connection with teeth which have erupted.

In this paper, however, it has been found simpler to deal with them in the reverse order.

THE PATHOLOGY OF DENTAL CYSTS.

Dental cysts are produced by irritation, causing an inflammation of the tissues surrounding the root of an erupted tooth. The stimulus producing this irritation may be due to bacteria or toxins in the root of a dead tooth. Thoma [1] suggests that it may also be produced by irritation caused by the presence of strong drugs in a root filling. It may be due to infection of the periodontal membrane in periodontal disease, or to trauma produced by a blow or pressure. It would be interesting to ascertain if any of the patients undergoing orthodontic treatment in the Children's Department develop dental cysts as a result of the stresses and strains, (sometimes rather excessive), brought to bear upon the teeth. In cases where the cysts are caused by periodontal disease or trauma, the teeth involved need not necessarily be dead, but are quite often found to be vital.

Now this irritation is followed by inflammation, and by proliferation (especially around the apical and accessory foramina), of certain epithelial cell rests found in the periodontal membrane, and which were first described by Malassez in 1885.[2] They are termed "rests" because they are the remains of or "rest of" the Sheath of Hertwig.

Under these inflammatory conditions, there is a hyperæmia and infiltration of cells, principally mononuclear leucocytes, into the tissues. Granulation tissue takes the place of the fibrous tissue of the periodontal membrane which is rapidly destroyed.

It is suggested by Klemensiewicz,[3] that at this point the contiguity of the dead and degenerating tissue with the living tissue stimulates the growth of new cells around the infected area. He is supported by Bier,[4] who states that the products of tissue destruction act as regenerative hormones for the reconstruction of cells.

There is no proof that these theories are correct, and our knowledge of the causes of cell growth is still very elementary, but we know that if the tissue resistance is high, a connective tissue capsule is formed around the inflamed area, with the formation of a granuloma or epithelial root tumour. If the tissue resistance is low, however, as would be the case in a person in bad health, a capsule is not formed, and the tissue will break down, with the formation of an acute alveolar abscess.

Before going further it should be mentioned that Grawitz,[5] asserts that the epithelium in inflammatory neoplasms of the roots of teeth may be derived from the oral mucous membrane, and not from cell rests, this being rendered more comprehensible through the observations of Bauer,[6] who, in performing apicectomies on teeth connected with these inflammatory neoplasms, has found that in some cases the epithelium which proliferates is derived from the antrum lining. Mr. Warwick James and Dr. Counsell, who are writing a paper (which is not yet published) on the "Origin of Dental Cysts," believe that the majority of these arise from epithelium which has grown down a sinus associated with apical infection. Erich Becker[7] of the Berlin Clinic goes much further afield and states that the immediate cause of the cyst is hæmorrhage into the periodontal membrane, caused by chemical or bacterial action. After bleeding, the blood coagulates, and the cyst cavity begins to form by the collection of serum in the middle of the clot.

The connective tissue capsule of the granuloma is strongly adherent to the tooth, and the fibres run around it concentrically, some being continuous with the periodontal membrane; it is also firmly fixed to the surrounding bone by extending into its medullary spaces, so that during extraction of the tooth concerned, the granuloma may or may not come away attached to the root.

Mummery,[8] who has thoroughly investigated the histology of granulomata, describes the presence of endothelial cells and fibroblasts, which form the

" building-up " cells of the tissues of these growths. He also finds polymorphonuclear leucocytes, which have a phagocytic action on bacteria, mononuclear leucocytes, which ingest red blood corpuscles and foreign bodies which may have been forced through the root canal, and lymphocytes. The last three are supplied by the blood. He goes on to describe the presence of plasma cells, mast cells, and wander cells.

Siegmund and Weber[9] describe the structure of granulomata as being reticular, with the presence of plasma cells, hystocytes, giant cells, and lymphocytes, some of which have a granular structure. Leucocytes are found, and their presence varies with and depends on the presence of bacteria. When they have done their work, they die, and are absorbed by the hystocytes. In old granulomata, fatty degeneration and the formation of cholesterin crystals have been recorded, and occasionally collagen is formed by the fibroblasts. With the use of a special fat stain (Sudan iii) fat may be revealed in the form of free globules, sometimes within mononuclear leucocytes.

It has been noticed that granulomata on deciduous teeth are more vascular and contain many more epithelial cells than those of permanent teeth. This is explained by the fact that the patient is younger and has more abundant and vigorous epithelial cells.

Haupl and Bauer[10] infer that by the nature of the cells contained in the granuloma it has an absorptive function, retaining the toxins acquired from the tissues, thus hindering the invasion of these toxins into the body. This would be an ideal condition, but as the capsule contains a definite network of capillary blood vessels communicating with the general circulation, it seems unlikely that the toxins are kept under such strict control.

In the short time at our disposal I cannot enter into the bacteriology of these granulomata, but refer you to Mr. Bulleid's extensive reports on this side of the subject, but it will be sufficient for our purpose this evening to remember that all granulomata are infective.

Referring to Diagram 1, we see that once a granuloma is formed it may :—

(i) Contain toxins of sufficient virulence to cause it to break down with the formation of a chronic alveolar abscess.

(ii) Contain toxins of sufficient virulence to irritate the tissues, which, if they contain cells of a certain character, these proliferate within the capsule, the central ones degenerating, with a formation of a dental cyst.

(iii) Contain toxins whose virulence is balanced by the patient's resistance, producing a condition of stasis, in which the toxins may be absorbed into the body, but do not cause any alteration in the local state of affairs.

Warwick James[11] suggests that the central degeneration of cells may be due to the fact that their life history is completed, but it is generally held that as the granuloma enlarges, on account of the mysterious proliferation of cells within the capsule, and the central epithelial cells become too remote from the periphery to receive sufficient nourishment from the network of capillary blood vessels in the capsule, with their consequent degeneration and formation of the cystic fluid. The cells near the capsule remain, and form the epithelial lining of the cyst. This varies in thickness from one cell upwards, the thickness probably depending upon the supply of nourishment, and the tension within the cyst cavity.

Cysts with no epithelial lining have been found, but this is probably due to destruction of the cells either by suppuration or during histological preparation. Secondary infection may occur in a cyst, causing suppuration, and should this infection be overcome, granulation tissue may be found to have taken the place of the destroyed epithelial lining. Granulation tissue is sometimes found scattered about at regular intervals in the cyst wall, and is in this case probably produced by atrophy of the lining cells, due to the pressure within the cavity, which frequently goes so far as to produce a flattened appearance in the lining cells.

The pulsation which is sometimes, though rarely, noticed within a cyst, is probably due to the presence of granulation tissue which is usually found in these cases. That it is not due to the presence of large arteries is shown by the fact that there is no undue hæmorrhage.

The pressure within these cavities has been investigated by Warwick James,[11] whose work shows that it is higher, in some cases considerably higher, than the capillary blood pressure. Leonard Hill[12] has determined the capillary blood pressure to be 3.5 cm. of H_2O, and in one of Warwick James' cysts a pressure of 100 cm. of H_2O was recorded, the lowest recorded case being 12 cm.

Pressure within these cavities is produced by an increased quantity of fluid within them, due to degeneration of cells, and Warwick James suggests that osmosis may also play a part in the increase of pressure. The fluid is of a viscid, transparent nature, rather straw coloured, and contains serum-albumen, serum-globulin, cells in various stages of degeneration, also cholesterin. The presence of these substances is never constant,

however ; cholesterin is sometimes entirely absent, and sometimes found in large quantities. This is not to be wondered at, for its presence in the blood varies considerably ; here it is found in the form of combined esters, and in diabetes there is a condition known as xanthoma, in which the cholesterin content of the blood is very high. It would, therefore, be interesting to discover a dental cyst in a diabetic patient so that we might examine its fluid contents ; but the apical areas of these patients of low resistance probably tend to the formation of acute abscesses.

Calcific and fatty degeneration have been known to occur in cysts of long standing, and the presence of hyalin has been demonstrated ; calcific degeneration takes place principally around the blood vessels, which is not an uncommon occurrence in imperfectly nourished tissues ; but although there is a vast literature on the subject of these degenerate conditions, their cause is still obscure.

There seems to be a sort of " vicious circle " which causes these cysts to expand, the internal pressure depending on the presence of fluid, which is produced by degeneration of cells. This is dependent upon the proliferation of the peripheral cells which seem to be stimulated by the pressure, as when this factor is removed by breaking the continuity of the cyst wall, the cyst ceases to grow. As they expand they take the line of least resistance, the variation in resistance of the surrounding tissues producing inequalities in shape. They absorb the bone in their path, and frequently expand the outer alveolar plate until it becomes as thin as parchment, or even completely disappears. The eggshell crackling noise described in text-books only occurs, of course, during a limited time when the bone is of a certain critical thickness.

In the mandible the cyst will push the inferior dental nerve and vessels before it, never, or rarely, involving them. They are too slow in growth to catch up, as it were, with the retreating nerve, and press upon it sufficiently to cause anæsthesia.

The mental nerve is displaced backwards or forwards according to the position of the cyst. In the maxilla their growth is quicker than in the mandible owing to the less dense consistency of the bone ; and the floor of the antrum is sometimes pushed upwards, until, in some cases, the sinus is nearly obliterated.

I need not enter deeply into the clinical appearance of these cysts for you are all familiar with that slowly-growing, rounded swelling, which causes no pain, but inconvenience, and is usually associated with the presence of a dead tooth or root. They are found on any tooth at any age, and so far have only been recorded in human beings.[13] They are usually found singly, though not rarely in numbers, and large ones sometimes appear to be segmented into separate locules. They are more commonly found in connection with the permanent dentition though not by any means rarely, with the deciduous.

We now pass on to the—

PATHOLOGY OF DENTIGEROUS CYSTS,

which are histologically identical with dental cysts, as regards their walls, epithelial linings, and fluid. They are connected with unerupted teeth of the permanent dentition, though on rare occasions they have been found involving deciduous teeth.

Dentigerous cysts undoubtedly have their incipiency about the normal time of eruption, and it is generally held that they are caused by an obstruction to eruption, or an exaggeration of the normal mechanical force of eruption, thus causing irritation with consequent inflammation and proliferation of the epithelial cells in the coronal portion of the tooth follicle.

Sprawson is of the opinion that the same inflammation that causes the productive periodontitis of unerupted teeth is capable of producing dentigerous cysts, and on examination of the roots of misplaced unerupted teeth one sees that nearly all show evidence of productive periodontitis.

Sprawson[14] has also put forward a hypothesis which seems to be sound, and which has not yet been upset, in which he describes what he thinks to be the most common cause of dentigerous cysts. He suggests that dentigerous cysts of permanent teeth most commonly originate in the formation of a dental cyst in connection with a deciduous tooth, which may or may not have been lost in the normal process of absorption. He states further that he has " Not yet heard of a case of a dentigerous cyst in man, involving a tooth, the deciduous predecessor of which was *in situ* and alive."

He makes no extravagant claims for his theory regarding dentigerous cysts involving third molars, and maintains that although it would be possible on account of the " burrowing " tendencies of cysts in the lower molar region, for these dentigerous cysts to have originated as a dental cyst from the second deciduous molar, it more probably arises from the formation of a dental cyst on the first permanent molar, which is frequently carious, and it is interesting to note how rarely the second permanent molar becomes involved in the burrowing cysts. I should, indeed, be glad to know of a case where this has happened. This immunity of the second permanent molar may be explained by the fact that the first permanent molar takes about four years to become so carious as to develop a

large cystic condition, during which period the second permanent molar has had time to erupt.

Having been told that it is probable that most dentigerous cysts arise from dental cysts upon deciduous teeth, you may ask how the crown of the permanent tooth comes to project into the cyst cavity? The explanation of this is that the dental cyst presses against the crown of the permanent tooth, which is covered by the now almost non-existent follicle, so that the cyst wall in contact with the crown atrophies on account of the pressure and lack of nourishment. The extent of projection of the permanent tooth into the cavity probably depends upon the stage of development of the permanent tooth germ and the degree of resistance offered by the attached tissues at the time when it becomes involved in the cyst. This holds good for both the generally held and Sprawson's theory of dentigerous cysts.

The significance of the presence or absence of Nasmyth's membrane on the crowns of teeth found in dentigerous cysts does not seem to be of much importance, for some workers claim to have found it in every case, while others say that it is totally absent.

Lartschneider[15] states that dentigerous cysts involving third molars may, in some cases, be traced to diseased tonsils, but beyond this statement of fact I can give you no further details, but merely mention it as an interesting point.

Cysts of eruption are spoken of by some people as though they were in a separate class of their own, but as they are so closely connected with epithelial odontomes, they may be dealt with in this communication.

They occur over deciduous teeth, or permanent teeth with or without predecessors.

When they lie over deciduous teeth, or permanent teeth with no predecessor, they are probably due to the force of a difficult eruption, and are frequently seen as a small bleb on the inflamed mucous membrane overlying an erupting tooth. In this case they may be looked upon as an exaggeration of the normal physiological process. It is quite conceivable, however, that when they become extensive they may envelope the tooth over which they lie, with the resulting formation of a dentigerous cyst.

The cyst of eruption over the permanent tooth which has a deciduous predecessor may originate in the same way as an eruption cyst of a deciduous tooth, or from a dental cyst originating from a deciduous tooth which has been shed, the cyst being left behind in the path of eruption of the permanent tooth.

The third epithelial odontome, namely—

MULTILOCULAR CYST

or adamantinoma, is, in the Bland-Sutton classification, the only tumour to fall under the heading of "epithelial odontomes."

Before dealing with its pathology, it will be well to say a few words about its clinical signs and symptoms, and its macroscopical and microscopical appearances, for they are probably not so familiar to you as those of dental and dentigerous cysts.

The name "multilocular" describes well the condition, of which there are several types, some with small locules, others with large and some with locules of varying sizes.

They usually occur in the lower molar region, though one has been found in the midline of the mandible, and a few in the maxilla. The age incidence is very variable, and they have been recorded in patients from the age of 5½ months to 75 years. The greatest number, however, have been recorded in early adult life (21 to 35 years).

They are very slow growing, and as they cause no pain the patient only presents herself (for they are more common in women), when it has reached a size sufficiently large to produce unsightly deformity, hinder the functions of mastication, deglutition, or respiration, or produce any discomfort such as hypersecretion of saliva.

In these later stages the growing edge of the tumour is usually dark red or brown in colour, this being due to the presence of blood from capillary hæmorrhage caused by pressure, and not to any special pigment. A case is recorded, however, in which a multilocular cyst containing melanin pigment was found in a child aged only 5½ months, though, of course, this may have been an early stage of development of a compound composite odontome.

When large, its surface is lobulated, and the growth may then be mistaken for myeloid sarcoma. Spontaneous fracture of the mandible has been known to occur. Teeth in contact with the cyst are exfoliated, their roots being extensively absorbed, while teeth in the opposing jaw may cause localied ulceration followed by secondary infection of the tumour, which may produce much pain.

In the early stages of development, the macroscopical appearance on section will show that the small locules are completely or very nearly solid, on account of papilliferous projections from their walls. When the locule has increased in size, however, they enclose a cavity which is bounded by these papillæ. Later on, the linings of the locules may be similar to those of ordinary dental

or dentigerous cysts. In the early stages the locules are quite distinct, and are separated by thick fibrous septa which become thinner as the locules grow, until communication is established between the adjoining cavities.

The microscopical appearance of the really early stage shows an alveolar appearance, which is produced by branching columns of epithelium whose outer layer consists of columnar cells, and whose central cells degenerate and give rise to a tissue resembling the stellate reticulum of the enamel organ. This stellate tissue breaks down here and there with the formation of the locules.

In older tumours the septa are composed of fibro-connective tissue, which may become calcified, the bony tissue probably arising from osteoblasts formed by a gradual metamorphosis of connective tissue cells. That part of the periphery which is bounded by the expanded part of the jaw, is covered with the stretched periosteum, which sometimes deposits bone around the mass in that region, the stimulus for such deposition being the internal pressure which is produced in precisely the same way as in the other two epithelial odontomes, and is transmitted from one locule to another. Although there is a capsule at this part of the periphery, the extent of the tumour in the inside of the body of the jaw is in no way limited, and strands of proliferating cells may be found extending for some considerable distance into the cancellous bone.

The cystic fluid is similar to that found in dental and dentigerous cysts, but it may vary slightly in quality in different locules.

The pathology of these cysts is very obscure. Malassez supposed them to arise from the para-dental rests, Eve and Heath from an invagination of the epithelium of the gum, Hesse from a supernumerary enamel organ or miscarried dental follicle, and Falkson, Bryk and Bland-Sutton from abnormal development of the enamel organ.

Kaufmann[16] is inclined to take the view of Eve and Heath, which he supports on the basis of only one case, however, in which some cell strands of the tumour were connected with the epithelium of the mouth.

It must be realised that the nature of the cells found in the tumour give us no definite clue as to its origin, for the altered surroundings and conditions to which they are subjected produce vast changes in their structure. Professor Donaldson mentioned as an analogous phenomenon, that the changes of the conditions brought about by chronic bronchitis may alter the character of the ciliated epithelium normally lining the bronchi to such an extent that the cells lose their cilia, and become squamous, or even keratinised.

Sprawson agrees with none of these views, and does not think that multilocular cysts have their origin in any of the sources just mentioned. His view is supported by the fact that there has not yet been recorded a case in which even the slightest trace of calcified dental tissues has been found, and, indeed, cases have been recorded in which all the teeth of the series were present. Sprawson's critics may remark that in this case, the origin is a supernumerary tooth germ, but this is very unlikely, as supernumeraries in the lower molar region are uncommon, and even if one did occur the chances of it producing a multilocular cyst would surely be very remote.

Others do not support the theories quoted because they consider that the tumour would occur at an earlier period in life, but it is well known that other tumours which arise from aberrant embryonic tissue, such as a hypernephroma, may occur in persons past middle life and not necessarily in young people.[17]

Small sections of multilocular cysts sent to the pathological department of one of the hospitals on several occasions have been returned labelled "Basal-celled Carcinoma." This, as you know, is rodent ulcer, and Sprawson is inclined to think that multilocular cystic disease is a form of basal-celled carcinoma which is not locally malignant to the same extent as rodent ulcer, and which instead of occuring on the side of the nose or inner or outer canthus of the eye, occurs in the molar region of the mandible.

Some workers claim that most multilocular cysts are a form of endothelioma, but this is a loose term, meaning very little, and is frequently used to avoid making a more definite statement.

In the pituitary body, or hypophysis cerebri, hypophyseal duct tumours usually appear in the region of the infundibulum. When they occur in the anterior lobe, however, they are usually referred to as pituitary adamantinomata. They may be cystic papillary, or partly cystic and partly solid, benign or carcinomatous, and sometimes resemble basal-celled carcinoma,[18] while other features make them similar to adamantinomata.

The significance of this is that the pituitary body is embryologically closely connected with the mouth, as the anterior lobe is an offshoot of the primitive buccal cavity.[19]

The only feature to suggest malignancy of epithelial odontomes, is the slight burrowing of the epithelial strands in multilocular cystic disease, which is rather similar to infiltration, this being characteristic of malignancy.

TREATMENT.

It is for this reason, and on account of the enormous size attained by multilocular cysts that their treatment differs from that of dental and dentigerous cysts.

Although it may be possible to enucleate successfully a small multilocular cyst, it is a futile proceeding for larger tumours ; for fracture of the jaw is inevitable, and remains of the epithelial strands are invariably left behind, only to cause a recurrency of the growth.

I was lucky enough while at the London Hospital the other day, to see a woman with a hugh multilocular cyst of the lower jaw, and which had been operated upon sixteen times (not at that hospital), and had recurred after each operation. She was being fitted with cast-cap splints, preparatory to having a large portion of her mandible removed, after which she will have a bone-graft inserted. This is the only really efficient treatment for cases which have reached so large a size.

In cases where part of the mandible is resected, the importance of putting in a temporary appliance soon after the operation in order to avoid the loss of space by contraction, cannot be overestimated, and splints should always be worn to keep the remaining part of the mandible in its normal position of occlusion. Diathermy is of little use, and radium is not used for treating these cases, as it is unsuitable for growths over 1 inch in diameter, and should not be used near the bone, which it would necrose.

The treatment of dental cysts is purely surgical. The teeth which are involved should be extracted at the time of operation on the cyst, though some operators prefer to be more conservative and preserve these teeth, filling the root-canals, and then performing an apicectomy when the cyst is opened.

There are four surgical methods to be described. In the first, a semilunar incision is made, the flap of gum reflected, and the outer plate of bone, if it still exists, is removed. The edges of bone are smoothed off and the whole of the cyst lining enucleated. The flap is replaced and stitched back in its original position, the cavity being allowed to fill with blood so that it may heal by "first intention."

The advantage claimed for this method is that at no stage of convalescence is there any deformity due to a depression in the bone, but this is a minor advantage, and quite outweighed by the trouble caused by after-pain and sepsis, which will almost invariably invade a large blood clot in the mouth.

The second operation is to incise the mucous membrane, reflecting the flap, and removing the outer bony wall. The edges of bone are trimmed, and the cyst lining enucleated as before. Some operators swab out the cavity with pure phenol, presumably to cauterise any epithelium which is left, or kill any bacteria if the cyst should be infected. The flap is tucked right back into the cavity, and that part of the bony wall of the cyst which is not covered by the flap is allowed to granulate over, while the epithelium of the flap creeps further into the hollow until a complete epithelial lining is formed.

Iodoform or cyanide gauze, or B.I.P. paste on gauze is sometimes packed into the cavity immediately after the operation which helps to stop hæmorrhage, and probably tends to prevent infection.

This operation should only be performed when the cyst is very small, or when it is septic, for if the linings of large cysts are removed one opens up a large area to infection and after-pain, and the chances of invading the antral cavity in the maxilla, or the mental or inferior dental nerve in the mandible are very great.

But why should one remove the beautiful epithelial lining of a cyst, only to replace it by another ? One supposes that it is done with the idea of preventing further growth, but this is already prohibited by the opening up of the cavity, which relieves the pressure within its walls, and, in any case, it is surely impossible to remove every trace of epithelial lining down to the last cell, some of which lie in little cavities and hollows in the bone, and unless this is done, the whole object of the operation is defeated.

The third technique is similar to the one just described, except that an epithelial inlay, usually taken from the inner aspect of the thigh, is laid over that raw part of the cavity which is not covered by the tucked-in flap. This shortens the time taken in healing, and makes the cavity less painful and less likely to become septic. The method is an improvement on the previous one, but should only be used in cases where the cyst wall is infected, and must of necessity be removed.

The technique now used by most operators is the Partsch method, in which an incision is made and the flap reflected ; the thin bony wall is removed with an engine bur, hammer and chisel, or preferably with nibbling forceps. The outer wall of the cyst is cut away and the bony edges are smoothed, the cyst cavity being converted into a depression continuous with the oral cavity. The inner part of the cyst lining is left intact, and the gum flap pushed over the smooth bony edges into the cavity, where it stays adhering to the cyst lining. If necessary, it may be kept in place with a small gauze plug, but it is impracticable to stitch it to the cyst lining, which is usually very thin.

The patient leaves the chair with a depression in the bone which is lined entirely with epithelium provided by the gum flap, and by the cyst lining, whose columnar cells undergo a gradual metamorphosis into the stratified squamous type of the oral cavity. There is practically no hæmorrhage or after-pain following this technique in which there is so little surgical interference.

The syringing out of the cavity may be left for the patient to do at home, a good solution for this purpose being 10 gm. sod. bicarb. to 1 oz. of 1 in 80 carbolic, the sod. bicarb. washing out blood and mucous, while the carbolic is antiseptic. A eusol mouth-wash should be provided. To facilitate syringing, the primary incision should be made with a view to making the resulting cavity self-cleaning, the maxillary incision being made as near to the alveolar border as possible, to bring the floor of the cyst flush with the incision and thus establish free drainage.

While operating on cysts in edentulous patients, it should be borne in mind that the fitting of dentures will be much facilitated if the alveolar ridge is preserved.

We have only a very elementary knowledge of the causes of bone regeneration, which takes place at the base of the cavities resulting from these operations, and which gradually obliterates the deformity. It is simply the natural process which takes place after all bone destruction anywhere in the body, and tends to reproduce as nearly as possible the original shape of the bone.

The treatment of dentigerous cysts is almost the same as that of dental cysts. The tooth within its walls is removed, except in some cases, and Mr. Evelyn Sprawson has very kindly lent some lantern slides for this evening illustrating the case of a child, aged 9½ years, who had a dental cyst in connection with the lower left second deciduous molar, and which had involved its permanent successor, thus becoming a dentigerous cyst involving that tooth. He removed the second deciduous molar and opened up the cyst cavity into which a cusp of the second premolar was projecting. This tooth erupted in its normal position, as you will see in the lantern slides. He has had a few similar cases, with equally favourable results, and these, of course, were also in young children.

Cysts of eruption should be treated by incision, opening up the small cavity, thus enabling the tooth underneath to erupt. This is not unlike the operation just described for certain dentigerous cysts in young children, which helps to illustrate that at certain stages of development, cysts of eruption are, to all intents and purposes, similar to dentigerous cysts.

The anæsthetic used in these cyst operations varies with the technique. A local or regional injection of 2 per cent. novocain is suitable for most cases, but where the cyst lining is to be removed a general anæsthetic is indicated, as it is extremely difficult to obtain with novocain complete analgesia of the cyst lining.

Apart from syringing and the use of a mouth-wash, very little after-treatment is necessary. In some cases, a purge is indicated, and it is as well to give the patient a nerve sedative such as allonal, or aspirin, phenacetin and caffein citrate tablets in their proportionate doses.

In these days it is hardly necessary to stress the importance of taking radiographs. They are especially useful as a guide while operating, as they frequently reveal pitfalls into which the unsuspecting operator would otherwise have inevitably fallen. Mr. Worth has radiographs illustrating cysts of all shapes, sizes, positions and numbers. They show up as translucent zones, with a very definite outline, and must not be confused with myelomata, which show a very slight structure in the translucent zone, and a less definite contour. What strikes one most in the radiographs seen in the X-ray Department is the frequency with which epithelial odontomes, sarcomata, carcinomata, syphilitic lesions, etc., will choose the lower third molar region, or angle or ascending ramus of the mandible as their site of infection. No satisfactory explanation of this has been suggested, but from the discussion which I hope will follow, I am looking forward to learning a great deal, and having an explanation of many of the difficulties in the problem of the pathology and treatment of epithelial odontomes.

In conclusion, Gentlemen, I must say how grateful I am to Mr. Sprawson and Mr. Lewin Payne for their kind help and for the loan of the slides. My thanks are also due to Mr. Bulleid and Mr. Warwick James for the information they have given me.

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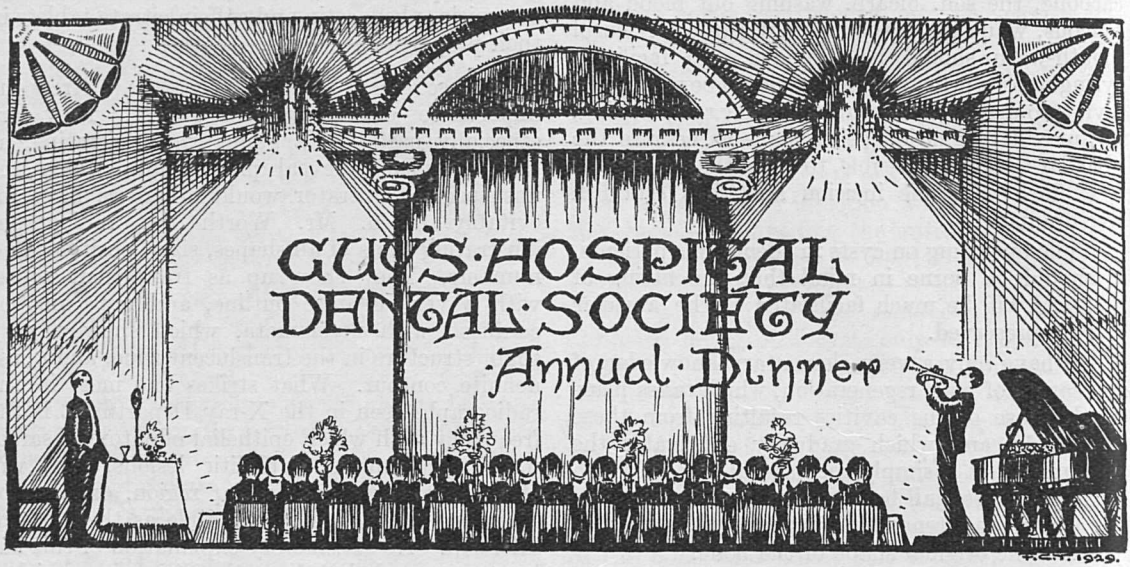

IF there is one characteristic for which the medical men of this Hospital should respect the dental, it is the immense keenness with which they throw themselves into all their activities, including their work. Last Saturday evening, the Dental Society sat down in the Wharnecliffe Rooms to their Thirty-first Annual Dinner, and more than 300 sets of teeth, young and old, natural and false, but no doubt all keen of edge, did justice to the cooking of the Great Central Hotel, Marylebone.

This annual gathering of Guy's dental men is so enthusiastically attended, that we obtain more than an inkling of the reason for the steadily growing popularity of our school. In a speech later in the evening, Dr. C. W. Roberts, D.D.S. (N.W. Univ. Ill.), appeared not a little astounded at the size of the assembly, for said he, "I had not expected to find present more than twenty or thirty elderly gentlemen." Suffice it to say, that the vigour of all, the staff, old Guy's men and present, leaves the impression on one of those fortunate to be a guest on this occasion, that Guy's Dental School cannot but "from strength to strength go on."

Grace having been asked by the President, Mr. F. N. Doubleday, each course in turn quietly went its way to the tune of continuous conversation and laughter. No other sound, such as the palpitating blare of saxophone was required to play the Grand Vol-au-Vent de Ris de Veau from plate to mouth. "The King," having been loyally toasted, and blue curls of smoke having appeared on all sides, we were treated with the coffee to Mr. Leonard Henry of wireless fame, but everyone knows this incomparable artist, and will appreciate that the following few minutes were amply filled with gentle fun; Mr. Henry only wavered one moment in his steady stream of tomfoolery, when a particularly blue-black spiral of smoke struck his nostrils, coming as he diagnosed from a "cooking cigar." Finally, he left us with his high-crowned grey felt hat on the top of his head, and his umbrella, of wireless frame, coiled inside.

Sir Frank Colyer, K.B.E., F.R.C.S., whose name we believe adorns every dental book-shelf, rose to propose the toast of the evening, "Guy's Hospital and Schools." He briefly reviewed the great names of past years associated with dental surgery

at Guy's: Fox, Bell, Salter and Newland-Pedley, to take a few. For further progress in future years, he asked men to realise that they must obtain an ever closer association with medicine, and that, if necessary, training in further mechanical improvements must be sacrificed to some extent to that end.

In reply, Prof. T. B. Johnston, M.B., Ch.B., said that the Hospital was really passing through an extremely critical and trying period, and he felt he was only giving voice to what all associated with Guy's must feel, when he expressed sympathy with both the Treasurer and the Superintendent at this juncture—the former preserved his impassive calm, the latter did not lose his humorous twinkle of eye—between them they kept the flag flying without curtailing the activities of the Hospital in any way, and without dramatically declaiming to the public that our substantial masonry was in danger of collapse; not yet had a revolving searchlight been placed on the tower of Hunt's House, although there was no more suitable site in London; and lastly, photographs of the staff and of the nurses had not yet found their way into the press, nor were these things likely to come about. A good story about a Scottish padré—the Dean produced the real thing in Scots brogue—produced a hearty laugh, and he turned to the brighter prospects of the Schools. The Medical School, we heard, is now saddled with a debt of only £3,500, and the Dental with a debt of £3,800. The bulk of the students are "good honest workers;" as illustrated by the following extract from a student's letter, " . . . . I propose going up for my final next time, for months I have worked at my books all day and far into each night." Needless to say, the candidate passed, but two years later.

Mr. John Lovering then sang two songs in a fine baritone voice, much to everyone's pleasure.

Mr. H. E. Marsh, M.C., L.D.S. (Eng.), D.D.S. Penn., President of the British Society for the Study of Orthodontics, proposed the toast of the Dental Society; he followed the toast with a brief speech in which he recalled his days as a demonstrator; he remembered once signing up a large gold filling, the work of hours, which had sorely taxed the owner's patience, but which " rocked "; said the latter, " I suppose that will last my lifetime "; " Just about till you reach the far side of London Bridge, if the wind does not blow against you," was the disappointing answer.

Mr. F. N. Doubleday in his reply gladdened our hearts with the assurance of the prosperity of the Society, and expressed his pleasure in his coming tour of Canada and the United States of America.

Mr. H. L. Messenger, M.C., L.R.C.P., M.R.C.S., noted that among the visitors the examiners were present in great force, and congratulated them on the great pass list of Guy's men during the previous few days. In particular he wished to welcome Dr. C. W. Roberts, D.D.S. (N.W. Univ. Ill.), through whose agency the bust of Dr. Howard Mummery had been presented to Dr. Black for Chicago University.

Dr. Roberts, modesty itself, in replying on behalf of the visitors, early remembered T. P. O'Connor's resumé of a visit to the States:— " A wonderful country, wonderful after-dinner speeches, but most wonderful was the patience of the listeners."

Mr. M. F. Hopson was eagerly called for and took the platform with a twinkle in his eye and a spring in his step; he capped all previous stories with the tale of a man who came to the Front Surgery pointing to a widely open mouth; the eager dresser extracted the obviously carious upper molar and despatched the man home with his dislocation *in statu quo*. Mr. Hopson, as we suspected, had never missed a dinner of all the thirty-one yet held, but whereas the assembly formerly had been that of a few grey-haired men, he now saw it rapidly becoming one of fathers and sons.

Mr. Doubleday rose to thank the officers of the Society for their work during the previous year, and in particular the Honorary Secretary, Mr. Selwyn Holms, on whom had fallen most of the work in connection with the dinner. The Secretary promptly in part denied this assertion and informed us that the President had been the hardest worker of all.

Wherever the truth may lie, the Dental Society is to be congratulated on an altogether successful and enjoyable evening.

Notice

Lost at Dental Society Dinner—A Parker Duofold Large Black Fountain Pen. Will the finder kindly return to S. Williams, c/o Dental Department, Guy's.

Nursing News

THE Guy's team of six nurses has once more been successful in winning the Challenge Shield for Invalid Cookery at the Universal Cookery and Food exhibition which was held at Olympia from January 14th to 25th.

This year, ten Hospitals sent in teams, but Guy's Hospital was ahead by 45 marks.

For the last seven years, a team of nurses from this Hospital has competed and has won the Challenge Shield every year except one, when the London Hospital Team beat us by 2 marks.

Team—Nurse M. B. Dixon, Nurse R. Hall, Nurse M. I. Llewellyn, Nurse M. E. Lloyd, Nurse D. Payne, Nurse H. A. Stanton.

Awards were also made for the individual trays :—

Large Silver Medal—Nurse Lloyd (Tray for Addison's Anæmia).

Silver Medal—Nurse Payne (Tray for Diabetes).

Bronze Medal—Nurse Hall (Tray for Gastritis) ; Nurse Llewellyn (Tray for Phthisis).

Diploma of Merit—Nurse Dixon (Tray for Nephritis) ; Nurse Stanton (Tray for Cholecystitis).

Correspondence

The Dental Society Dinner

To the Editor of the GAZETTE.

SIR,—One appreciated very much the work of the Dental Society in arranging the Dinner on Saturday and all had a very enjoyable evening.

It would be interesting to know if other readers of the GAZETTE, who attend this annual dinner, would not prefer a return to straight tables, as in past years there has been nothing like the difficulty experienced on Saturday, in finding one's old associates.

No time was allowed between toasts, entertainments, and " God Save the King," so that one left with but little chance of meeting and conversing with old friends.

One feels that many would prefer to use the time, allocated to entertainments, for renewing acquaintances. Then, with longer intervals between toasts and with " God Save the King " half-an-hour or so after the last toast, there would be no regrets that anticipated reunions were not made.

These important functions are by no means easy to arrange ; but, no doubt, the GAZETTE can discover which arrangements are the more popular amongst those who have left Guy's.

Yours, etc.,

STANLEY P. MEACOCK.

56, Queen's Road,
Coventry.

Sport

Rugby

Guy's v. St. Mary's
(2nd Round Inter-Hospital Cup)

AT the Athletic Ground, Richmond, on Tuesday, February 18th, Guy's advanced to the Semi-Final stage of the Competition when they gained a convincing victory by the surprising margin of three goals, a dropped goal and three tries (28 points) to nil.

It was generally anticipated that this tie would be very close, as the St. Mary's fifteen possess a fine pack and their form in their club games indicated that Guy's would have to face some strong opposition.

As it turned out the game was much closer than the score suggests, but Guy's went off at a terrific pace and in the first twenty minutes had piled up a lead of 16 points.

During this period Guy's were irresistable, and with the forwards more than holding their own, the backs took full advantage of every opportunity that came their way and scored on each occasion.

St. Mary's then woke up and for the remainder of the first half and the opening of the second half, they exerted heavy pressure and should have scored on at least two occasions, but the Guy's defence held out magnificently, and in the closing stages they retaliated by a series of attacks which resulted in another twelve points being registered.

This was all the more meritorious as Guy's lost the services of their full-back D. F. Ryan, who had to retire fifteen minutes from the end with a damaged leg.

The first three tries which were registered by W. G. Morgan, A. G. Johnson and T. G. Robinson, all came as a result of some brilliantly executed rounds of passing, whilst the fourth came through

an individual effort by W. G. Morgan who intercepted when St. Mary's were attacking and eventually sent A. G. Johnson in for a fine try. Two of the tries in this half were converted by R. A. P. Hogbin.

Following the interval St. Mary's made strenuous efforts to break through, and they had bad luck when Cotman hit the goal-post in a good attempt to drop a goal, and Seely, after a great run through the centre, just failed to reach the line.

Guy's eventually turned a splendid defence into an equally fine attack, and with the forwards showing great dash in the open, carried play to the St. Mary's goal line, when G. F. Lashmore secured and touched down for another try, which was quickly followed by another excellent try by A. G. Johnson, one of which Hogbin converted.

Near the end Windsor H. Lewis crowned a fine afternoon's work by dropping a perfect goal with his left foot.

It was a very interesting game and both sides made brilliant efforts to keep the ball in the open.

The back division, consisting of T. G. Robinson, J. E. Giesen, W. G. Morgan and A. G. Johnson, had a wonderful understanding, and with J. W. Eustace getting the ball out quickly to Windsor Lewis, the latter was able to initiate many of the attacks which eventually brought success.

Until he was injured in the second half, D. F. Ryan had played a sound game at full-back, and whilst all the forwards worked hard, J. R. F. Popplewell, T. Morgan and R. A. P. Hogbin were always to the fore in the loose.

Team—D. F. Ryan; T. G. Robinson, J. E. Giesen, W. G. Morgan, A. G. Johnson; W. H. Lewis, R. J. Eustace; J. R. F. Popplewell, C. D. Malone, R. A. P. Hogbin, K. P. Smith, T. Morgan, G. F. Lashmore, L. I. S. Campbell, J. Kunovsky.

Guy's v. King's College
Inter-Hospital Cup, Semi-Final

ON Thursday, February 27th, at the Athletic Ground, Richmond, Guy's reached the Final of the Competition by defeating King's after a splendidly contested game by three goals, a penalty goal and a try (21 points) to a goal and two tries (11 points).

It was undoubtedly one of the finest games seen in the competition for some time, the football from beginning to end being full of interest and the excitement intense until the whistle blew for no side.

King's gave Guy's a shock in the first half when they were clearly the better side and crossed over at the interval with a well-deserved lead of five points. In striking contrast to their cup-tie against St. Mary's, Guy's took a long time to settle down and in the early stages, King's displayed excellent form and caused the Guy's defence many anxious moments.

About ten minutes before half-time, the chances of Guy's pulling the game out of the fire did not look at all good, when W. G. Morgan had to leave the field with a damaged ankle.

However, he was able to resume after the interval, and with the forwards gradually gaining the upper hand in the scrums, our backs saw far more of the ball and seized the chances that came their way, which eventually gave Guy's the points for victory.

At the last moment it was found that D. F. Ryan was not fit enough to take his place and with L. Wailer and T. C. Hale-Monro both on the injured list, Guy's made an excellent selection when they brought in I. K. Thomas to fill this onerous position.

Thomas played a splendid game and never faltered once, in spite of the heavy pressure placed upon him in the early stages. He also came in extremely useful when he completed the three-quarter line whilst W. G. Morgan was off the field injured.

King's kicked off and at once found touch in our 25, and after some good rounds of passing took the lead at the end of five minutes when Mayo made a clever run through the centre and passed to Gilpin.

The latter when faced by Thomas, punted over the goal line and won the race for the ball for an unconverted try.

This early success stimulated King's to confidence, and on two occasions they were only held up on our goal line. However, a penalty against King's brought relief to Guy's and Guy Morgan found touch near midfield.

Following some excellent rounds of passing on both sides, Windsor Lewis seized an opening in the King's half and sent Giesen through the centre. The latter gave a perfect pass to Guy Morgan who, when faced by the full back, sent A. G. Johnson in for a fine try, making the scores level.

The excitement was great and King's redoubled their efforts to break through. Several dashing raids by their forwards nearly carried them over, and with their backs handling well it looked as though they would take the lead at any moment.

In one of these attacks, Guy Morgan was injured and had to be assisted from the field. In spite of this handicap, Guy's stuck to their task and a fine defence kept King's out, until just before the interval when Mayo who had played a splendid game for King's, raced right through the defence and scored near the posts for Salkinder to convert.

Following the interval, W. G. Morgan was able to resume, and Guy's at once carried play to well inside the King's 25, but were quickly repelled. In midfield King's were penalised, and T. Morgan found touch with a lengthy kick. Another penalty to Guy's in midfield soon followed which the King's full-back mis-fielded just in front of the goal posts. A series of scrummages followed, and eventually Eustace sent out an excellent pass to Windsor Lewis who flashed through a surprised defence to score a magnificent try in between the posts for Hogbin to add the goal-points, which placed Guy's on level terms again.

A little later Giesen intercepted a promising movement by the King's backs and ran strongly to King's 25 where Guy's set up considerable pressure.

In a line out King's were penalised and from 40 yards out and near the touch line, Hogbin kicked a splendid penalty goal which gave Guy's the lead and cheered their supporters to great heights.

This reverse undoubtedly upset King's, whilst on the other hand, it encouraged Guy's to such an extent that for a time they were well on top.

During some loose play in midfield, Johnson cleverly saved the ball from going into touch and worked his way to the centre, where Popplewell took advantage of a blunder in defence and broke away to King's 25. With Giesen and Robinson well up on the wing, the latter managed to cross near the corner flag, for Hogbin to kick another magnificent goal.

Even this did not damp the ardour of King's, who by clever passing and a short punt carried play to our goal-line. However, Windsor Lewis saved and following up a lengthy kick caught the full-back in possession. Some good passing between our backs followed, but King's by some first-class tackling brought Robinson down when a score looked certain.

A dashing raid by the King's forwards took play to our 25, and after several scrums Windsor Lewis again set our backs going, but through over-confidence Gilpin intercepted a pass and showing a clear pair of heels ran in for a splendid try which Sulkinder failed to convert from an easy position.

With only five points separating the two teams, excitement was now intense, and rallying to the calls of their supporters, the Guy's forwards carried out several fine raids. From one of these Guy's should have scored again, but Lashmore was unlucky to knock-on when crossing the goal-line.

However, immediately afterwards, Windsor Lewis made a glorious dash through the centre, and with a clever reverse pass to Johnson the latter crossed near the posts for Hogbin to kick another goal.

Guy's kept up the pressure until the end, and Giesen, Morgan, Johnson and Robinson took part in several good bouts of passing.

Near the end Windsor Lewis had to leave the field with a knee-trouble, but Guy's hung on to their lead and retired winners as stated.

Team—I. K. Thomas; T. G. Robinson, J. E. Giesen, W. G. Morgan, A. G. Johnson; W. H. Lewis, R. J. Eustace; J. R. F. Popplewell, C. D. Malone, R. A. Hogbin, G. F. Lashmore, T. Morgan, J. S. Batchelor, J. Kunovsky, L. I. S. Campbell.

Hockey

Guy's v. Felsted School

FELSTED SCHOOL beat Guy's at Felsted, on 22nd February, by 2 goals to 1.

It was very regrettable, in view of the proximity of the Semi-Final Cup-tie *versus* St. Thomas's, that only four of the first eleven turned out, the remainder being absent for totally inadequate reasons in the majority of cases. Under the circumstances, Guy's was fortunate to be beaten by such a small margin. Guy's led at half-time 1—0, Felsted having missed several opportunities in our circle. L. N. Trethowan scored for Guy's.

Felsted were much improved after half-time and lasted the pace the better. T. E. Carr in goal made several brilliant saves, but in time Felsted equalised, and shortly before the finish their outside left dribbled in and scored the winning goal.

Good ball control was not much in evidence owing to the irregularity of the ground, but otherwise the hockey was clean and vigorous.

For Guy's T. F. Todd and S. N. Tinkler, at back, played well, and T. E. Carr in goal was excellent. Of the forwards H. O. Lyne and L. N. Trethowan were outstanding.

Team—T. E. Carr; T. F. Todd, S. N. Tinkler; S. W. Wright, G. N. Carrell, W. W. Jones; R. O. F. Tilleke, H. O. Lyne (Capt.), C. J. Hartley, L. N. Trethowan, K. E. Fletcher.

Guy's v. Dover Castle

GUY'S visited Dover College on February 26th, and won a hard contested game by 3 goals to 2.

Dover College started rather shakily, but Guy's were unable to score owing to many brilliant saves by their goalkeeper. Dover scored early, and Guy's did not equalise until just before half-time when R. V. Payne netted.

In the second half Guy's were much the better side, and but for the brilliance of the school goalkeeper would have scored much more frequently. As it was, Guy's obtained a 3—1 lead before Dover rallied and obtained their second goal following a breakaway on the right wing. During the final stages Guy's continued to press, and the school goal had several narrow escapes. For the Hospital H. O. Lyne and R. V. Payne added the second and third goals.

This match was one of the best of the season, and certainly the best since Christmas. H. O. Lyne and R. O. F. Tilleke on the left wing, played very well, Tilleke's centreing especially was of a high standard, and deserved a better reception from the insides.

One feature which deserves mention was the excellent umpiring of T. H. Chigwell (Guy's) and T. S. Nevill, the Welsh International, a master at Dover. Only major infringements were penalised although the game was kept well in hand.

Team—T. E. Carr; S. N. Tinkler, F. R. Hayward; T. F. Todd, R. A. Sykes, T. E. Mitchell; R. O. F. Tilleke, H. O. Lyne (Capt.), C. J. Hartley, R. V. Payne, C. A. Clarke.

Guy's v. St. Thomas's
Semi-Final Senior Inter-Hospital Cup

GUY'S played St. Thomas's at Chiswick (St. Thomas's ground) on Friday, 28th February, in ideal weather. St. Thomas's won a game, closely contested until the final stages, by 5 goals to 1.

Starting promisingly, Guy's should have scored in the first minute through F. E. Camps who hit the ground with an open goal presenting. St. Thomas's rallied from this start and a ding-dong struggle commenced with the game changing ends frequently.

St. Thomas's should have scored through H. W. Boake who twice shot just wide. Finally, Boake scored, following up an initial shot which was not cleared.

The Guy's backs, G. N. Carrell and F. R. Hayward, were at their best, and repeatedly broke up promising forward attacks. The forward line was disappointing when in the St. Thomas's circle, and failed to score before half-time.

Guy's commenced well in the second half, and after 15 minutes equalised through a straight shot from H. O. Lyne. Following this, they improved all round, but failed to score.

The score remained 1—1 until the last 15 minutes when the St. Thomas's forwards at the opportune moment, ran through twice within two minutes to score. Guy's morale was badly upset, and St. Thomas's siezed their opportunity and pressed continuously to register yet two more goals. Thus, within eight or ten minutes four goals were scored and Guy's decisively beaten. They rallied in the last few minutes, but were still unable to get goals, the St. Thomas's defence being inspired by their forwards.

St. Thomas's deserved to win as they were the better side, but Guy's, for the greater part of the game, played just as well, and the score does not represent the play.

For Guy's T. E. Carr in goal—deputising for J. B. Schofield—G. N. Carrell and F. R. Hayward at back, R. A. Sykes at centre-half, and H. O. Lyne at inside-left, played well. The remainder of the side was disappointing. H. O. Lyne in particular played probably his best game for the Hospital besides captaining a defeated side well. Throughout he worked harder than anyone else.

Our thanks are due to Mr. Ormond and Mr. Morgan for coming down to watch and encourage us, and to our few supporters, who made up for lack of numbers by loudness of cheering.

Team—T. E. Carr; G. N. Carrell, F. R. Hayward; T. F. Todd, R. A. Sykes, T. E. Mitchell; R. O. F. Tilleke, H. O. Lyne (Capt.), F. E. Camps, R. V. Payne, C. A. Clarke.

Fencing

Guy's v. St. Thomas's (Inter-Hospital)

ON Saturday, February 8th, the Hospital regained the Inter-Hospital after a close fight with St. Thomas's.

H. N. Garrus and P. A. Gorer represented the Hospital in foil, and after some very excellent encounters, tied for first place. In the fight-off, Gorer beat Garrus by the odd hit after a fight that was easily the best of the afternoon. Both are to be congratulated on the splendid form and style which they displayed. In the epée E. L. Monkhouse came into the team in the place of H. N. Garrus. The epée event is always an uncertain one, and after some rather poor displays, the Hospital got the third and fourth places. The sabre event, which was taken last, was noticeable for the hard hits that were exchanged throughout and the number of barrages that finally arose. Garrus fought well, and finally, after the third barrage, secured second place for the Hospital.

Monkhouse appeared to lack practice and showed that, considering his experience, he has not learnt all that he ought to about time thrusts.

Hospital Information, etc.

Pass List

CAMBRIDGE INIVERSITY.

Bachelor of Medicine and Surgery.

G. N. Wood.

Master of Arts.

G. N. Wood.

CONJOINT BOARD.

January, 1930.

FINAL EXAMINATION, PART I.

Pathology.

G. H. Gool. T. C. Outred.
C. K. Simpson. P. T. L. Day.

FINAL EXAMINATION, PART II.

Medicine.

*F. W. Chippindale. *P. V. Reading.
*D. W. C. Cox. *E. H. Rink.
*H. J. Croot. J. M. Robertson.
G. H. Gool. B. Southwell.
A. D. H. Hugo. *E. N. Stevens.
*B. R. Medlycott. *F. H. Stevenson.
*L. D. Pringle. G. O. B. Whitwell.

Midwifery.

J. Carlton. *R. G. Sowter.
O. Ive. R. W. Stephenson.
R. O. Payne. G. V. Steward.
N. S. Plummer. G. O. B. Whitwell.

Surgery.

G. Balasuriya. *R. G. Sowter.
*R. S. Harrison. *B. T. Squires.
W. J. Johnson. R. W. Stephenson
*E. H. Rink. *E. N. Stevens.
C. A. Rumball.

D.P.H. EXAMINATION.

January, 1930.

The following were recommended for the Diploma :—

D. F. Johnstone. M. Mitman.
P. M. Moffatt.

SOCIETY OF APOTHECARIES OF LONDON.

February, 1930.

Surgery.

A. L. Thomas.

Forensic Medicine.

C. Skinner.

Midwifery.

R. Franklin. N. I. Kronenberg.

Change of Address

G. T. Hankey, 85, Wimpole Street, W.1. Phone : Welbeck 6127.

H. E. Harding, 77, Riverdale Road, Sheffield.

R. Jarman, Flat 4, 10, New Cavendish Street, W.1. Phone : Langham 3471.

W. E. Levinson, 70, Marine Parade, Brighton. Phone : Brighton 3971.

Miss A. M. Sadleir, Bank of London & South America, 399, Calle Bartolome Mitoe, Buenos Aires.

G. A. R. Winston, 25, Sharia Manakh, Cairo, Egypt.

W. Mark Brown, M.B., B.S., 29, Park Mansions, Hendon Central, N.W.4.

E. H. Roche, M.B., B.S., Elm Lodge, Elm Row, Hampstead, N.W.3.

Appointments

Flying Officer J. L. Groom to No. 1 Flying Training School, Netheravon.

G. T. Hankey, L.D.S., R.C.S., to be Honorary Dental Surgeon, St. Bartholomew's Hospital.

Flight-Lieut. J. D'I. Rear to Princess Mary's R.A.F. Hospital, Halton.

A. R. Thomas, O.B.E., to the *Victory* for R.N. Hospital, Haslar.

Papers by Guy's Men

H. W. Barber, M.B. (1) Benign Sarcoid Lymphogranuloma of Schaumann ; (2) ? Leukæmide. Case for Diagnosis, *Proc. Roy. Soc. Med.*, 1930, xxiii, 413 ; *Sec. Dermat.*, 19.

L. R. Broster, M.Ch. Specimens of (i) Hypernephroma ; (ii) Secondary Hypernephroma in Femur, with Spontaneous Fracture after 9 years, *Proc. Roy. Med. Soc.*, 1930, xxiii, 551 ; *Sec. Neurol.*, 17.

—— Case of False Localising Signs in Cerebral Tumour: Endothelioma of Left Sylvan Region revealed by Ventriculography, *Proc. Roy. Soc. Med.*, 1930, xxiii, 552 ; *Sec. Neurol.*, 18.

A. H. Douthwaite, M.D., F.R.C.P., and Miss Angrove. A Note on Remedial Exercises in the Treatment of Pulmonary Diseases, *Lancet*, 1930, i, 346.

G. B. Dowling, M.D. ? Lupus Erythematosus. Case for Diagnosis, *Proc. Roy. Soc. Med.*, 1930, xxiii, 413 ; *Sec. Dermat.*, 19.

T. R. Hill, M.D. ? Recurrent Acute Internal Hydrocephalus of Idiopathic Origin. Case for Diagnosis, *Proc. Roy. Soc. Med.*, 1930, xxiii, 525 ; *Sec. Neurol.*, 13.

R. N. Ironside, M.B. Spondylose Rhizomelique, *Proc. Roy. Soc. Med.*, 1930, xxiii, 530 ; *Sec. Neurol.*, 18

—— and M. Guttmacher. The Corpus Callosum and Its Tumours, *Brain*, 1929, lii, 442.

C. A. Moody, L.D.S., R.C.S. Administration of Ethyl Chloride, *Brit. Dent. Jour.*, 1930, li, 160.

A. E. Rowlett, L.D.S., R.C.S. The Association, the Dental Board and Dental Health Education, *Brit. Dent. Jour.*, 1930, li. 157.

W. S. R. Thomas, M.B. Aneurysm of the Heart, *Lancet*, 1930, i, 405.

P. Turner, M.S. Tuberculous Ulceration of the Tongue, *Proc. Roy. Soc. Med.*, 1930, xxiii, 427 ; *Clin. Sec.*, 35.

S. J. F. Webb, L.D.S., R.C.S. Practical Hints, *Brit. Dent. Jour.*, 1930, li, 171.

C. Worster-Drought, M.D. Dystrophia Myotonica, *Proc. Roy. Soc. Med.*, 1930, xxiii, 427 ; *Clin. Sec.*, 35.

—— Chronic Hypertrophic Interstitial Neuritis, *Proc. Roy. Soc. Med.*, 1930, xxiii, 524 ; *Sec. Neurol.*, 12.

—— and W. E. C. Dickson, M.D., F.R.C.P. Case of Endothelioma (Meningioma) at Level of Foramen Magnum, *Nat. Med. Jour.*, 1930, 19.

Marriages

HOPS—KRITZINGER.—On 15th February, 1930, at the Dutch Reformed Church, Joubertina, South Africa, Kenneth Hops, L.D.S., youngest son of Mrs. J. C. Hops, High Street, Oudtshoorn, to Hannie, youngest daughter of Mr. and Mrs. J. A. Kritzinger, "Le Bocage," Joubertina.

WHITE—SALTMARSH.—On February 26th, 1930, in Southwark Cathedral, Dr. Crawfurd White, to Winifred May Saltmarsh.

EDS. {J. B. B. / P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *22nd March* 1930 *Number* 1087

PASSIM

WE suppose the most vital question of our lives is what will become of us when we leave Guy's. It is a question which concerns, or has concerned all our readers; for some of them it requires urgently to be answered, for others it has already been answered, but this latter group must often pause to reflect whether the right thing has really been done. It is a problem, moreover, which is unique in that it entirely and absolutely concerns ourselves, and one which cannot satisfactorily be solved by our mentors. And finally, it is a puzzle in the solution of which we derive very little aid from anybody or anything except perhaps circumstance. It is all very well to announce airily, that one is keen on surgery, or that so-and-so would make an excellent laboratory worker, the one is merely an expression of conceited ambition, the other is usually a malicious criticism. Considering the difficulties which confront anyone who seeks an alternative to either general practice, which, after all, offers the best facilities for the observation of human nature, or the Services, the attractions of which are elsewhere referred to in this number, we marvel that there should be any budding specialists left.

We presume that the germ of decision really begins to take shape during that period immediately preceding and following upon qualification, and it is then that our plastic minds become gradually moulded by the impressions with which we are provided by circumstance. Some of us leave Guy's and plunge—sometimes willy-willy—into the throes of general practice; others spend a year or two at provincial hospitals or infirmaries—or as locum tenens; while others remain under the amply protective wings of the Hospital which weaned them, consolidating their Clinical experience in the capacity of House Officers, or working for higher examinations, ambitious, perhaps, to become consultants or specialists. Few of those, however, who thus aspire to a life of specialism, realise sufficiently, if at all, the fundamental division of medicine into curative and progressive branches. This difference was stressed recently with logical clarity by no less distinguished a pioneer than Sir Thomas Lewis. Almost all the training in a large teaching Hospital is curative in principle, and Guy's is no exception. There is only one appointment in which progressive medicine in any way asserts itself, and that is Clinical, which, *per se*, is a valuable one on this account. But we have grave suspicions that this advantage is to a large extent neutralised by the anachronism of the appointment, and that it is merely some cruel cynicism which has prompted the invitation of the warm bath of medical idealism to those whose subsequent lot must be the cold shower of medical realism, as exemplified for instance by that distressingly common specimen—the melancholic menopausal medical out-patient. Let it not be said, however, that we in any way deprecate the later appointments of the Resident Staff, for it is they alone which give us our foundation of the principles of treatment.

How much more valuable would the Clinical appointment be to the man who, with the foundations of curative medicine consolidated by his experience in the general surgical or medical wards, or in the out-patient department, wishes to gain some experience of that realm of medicine where self-confidence gives place to diffidence, and where quantity giving way to quality, the more matured mind might have the leisure to develop that spirit of patient deliberation, so essential to the investigator and so valuable to the consultant? Thus Clinical might become the coveted paradise of the man working for his Membership or the young investigator for whom Sir Thomas Lewis appeals, rather than the "Nursery Slopes," where one learns the gentle art of concealing one's ignorance,

and hastily burying under foot one's dropped bricks. (We hasten to assure the present Clinicals that we have no intention of including them in this expression of our own experience.)

With sorrow, we learnt on Tuesday morning last of the death, at the early age of forty-one, of yet another prominent Guy's man, John Magnus Redding, following an abdominal operation. Having trained at Charing Cross, he came to Guy's after the War as radiologist to the surgical side of the Hospital. An obituary notice will be published in the next number. We would offer our sympathy to his wife in her sad loss.

It is surprising that the world of literature, journalism and the drama has not been populated by a large proportion of men and women with a medical training—for while a scientific education develops an orderly and logical mind, contact with patients no less certainly develops the gift of spinning a good yarn, and the study of clinical signs and the perusal of microscopical sections a fertile imagination. True it is, however, that our profession can claim many distinguished men of letters and playwrights, Oliver Goldsmith, Sir Arthur Conan Doyle and Harold Dearden to mention three widely different personalities, and it is pleasing to note that at the present moment there are at least two Guy's men who have set pen successfully to paper. The one is Arthur Miller, the author of "Odd Numbers," a most amusing farce which is enjoying a good run at the Comedy Theatre; and the other is Mr. Clayton-Jones, who has written a modest little sketch in *Punch*, (January 22nd), entitled "The Surplus," so modest that it has only just come to our ears. It deals mainly with a motor-car, and although only three parts of her anatomy—her name is Aggie—are mentioned, the description is so reminiscent of Mr. Clayton-Jones' famous Morris, which so recently used proudly to bask in the sunshine of Maze Pond, that we might easily have spotted the author of the sketch.

Wednesday afternoon saw the Hospital empty, and everyone at Richmond to see the Cup Final against St. Bartholomew's; once again the Rugger side showed "Cup" form, and from the moment A. G. Johnson crossed the line after a fine sprint, they just maintained the upper hand in a very evenly contested game, in which both three-quarter lines showed to advantage. No final can have been more enjoyable to watch for a long time, and although the final score was perhaps a little flattering, there was no doubt that the win was well-deserved.

Obituary

ALFRED HERBERT TUBBY, C.B., C.M.G., M.S., F.R.C.S.

By the death of A. H. Tubby at the age of 67, on February 23rd, Guy's has lost one who attained to eminence and world-wide reputation as an Orthopædic Surgeon. Educated at Christ's Hospital, Tubby came to Guy's in 1880, and had a most distinguished career as a student, taking gold medals in medicine and surgery in the M.B., B.S., London, and honours in forensic medicine, anatomy and materia medica. After doing house appointments he became Demonstrator of Physiology at Guy's and also studied abroad at Halle and Leipzig. His aim was always towards surgery, however, and he had not long to wait before he was appointed surgeon to the Evelina Hospital for Sick Children and to the National Orthopædic Hospital. In these two appointments he had the opportunity he wanted, to study the treatment of deformities and thus lay the foundation of what was to become his life's work, Orthopædic Surgery.

He did not, however, neglect general surgery, and in 1894 he was appointed Assistant Surgeon to the Westminster Hospital and remained on the active staff until the age of 57, when he was elected consulting surgeon. As a general surgeon Tubby had sound judgment, and was a quick and skilful operator, but it is for his work in orthopædics that he will always be remembered. His book "Deformities; a treatise on Orthopædic Surgery," first published in 1906, brought him fame throughout the world, and still remains one of the most important works on the subject. He also, together with Sir Robert Jones, wrote a book on "Modern Methods in the Surgery of Paralysis," in which their work on tendon transplantation, nerve grafting and other means of assisting paralysed limbs is well described. His last book, "The Advance of Orthopædic Surgery," appeared in 1925.

In addition to writing books and articles on orthopædics, Tubby was prominent as a founder of the short-lived British Orthopædic Society, and was a member of the present British Orthopædic Association. He was also secretary of the Section

of Diseases of Children of the British Medical Association in 1899, and president of the Section of Orthopædics and Diseases of Children in 1921. As a member of the Hunterian Society, he eventually became President and Orator.

Although engrossed for many years in professional work, hospital practice and writing books, Tubby also found time to do other things, for he was a keen sportsman, shooting, fishing and mountaineering being his chief amusements. In this connection he wrote two articles on Chamois Hunting.

When the War broke out, Tubby, as a Lieutenant-Colonel of the Territorial Medical Staff, joined the South London General Hospital, and in 1915, was appointed a Consulting Surgeon to the Mediterranean Expeditionary Force with the rank of Temporary Colonel on the Army Medical Staff. His services were three times mentioned in despatches and he was given the distinctions C.B. and C.M.G.

As a man, Tubby was of a most genial disposition, was gifted with an extraordinary memory which made him a brilliant conversationalist and at all times a most interesting companion. He leaves a widow and married daughter, to whom he was a most devoted husband and father.

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In Memoriam: Ray Palmer, who died 18th March, 1929, in Naaman.

"Mythical Maladies"

A Clinical Lecture delivered at Guy's Hospital, November, 1929, by Arthur F. Hurst, M.D.

GENTLEMEN,—Few women reach the age of fifty without being told that they have a movable kidney, visceroptosis, adhesions, mucous colitis or auto-intoxication from intestinal stasis, and I have known many who have been treated for all of them. The object of my lecture to-day is to show that some of these maladies are always myths, and the others, though they may occasionally give rise to symptoms of more or less seriousness, have much more frequently no existence in fact.

Movable Kidney.—The kidney lies in a retroperitoneal bed of fat, which is semi-liquid. It consequently descends during inspiration and drops when the erect position is assumed. Its mobility varies greatly in different individuals, but it is never fixed except after death, when the body-fat solidifies, after nephropexy, and as a result of perinephric inflammation. In a large majority of healthy women the right kidney descends sufficiently on deep inspiration to be palpable on examination in the horizontal position, and it is often possible to reach above its upper pole. On standing its lower pole frequently drops below the iliac crest.

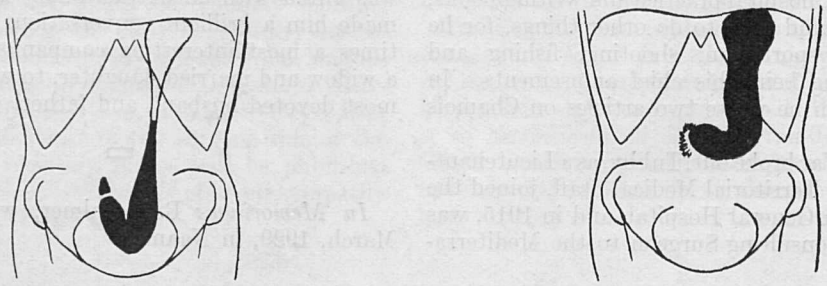
As the normal kidney is movable, a "movable kidney" cannot be regarded as a disease, and simple mobility never gives rise to symptoms in spite of the fact that a single Birmingham surgeon has fixed 1,500 movable kidneys in the last 30 years. But a fixed kidney is certainly pathological and kidneys often become painful and tender as a result of nephropexy. I have seen about 20 cases of Dietl's crises caused by kinking of the ureter by an aberrant renal vessel, but in only one instance was the kidney unusually mobile, and in the majority, most of which occurred in men, the kidney was so little movable that it was not palpable except when a hydronephrosis developed during an attack.

Many thousands of kidney belts have been supplied to the unfortunate owners of kidneys, which were sufficiently palpable to be easily discovered on abdominal examination. A kidney belt very rarely holds the kidney up, the pressure it exerts not only causes pain, but may compress the ureter and produce the hydronephrosis it is supposed to prevent, and it certainly often interferes with the normal activity of the ascending colon.

Gastroptosis, pelvic cæcum and dropped colon.—The X-rays have not proved an unmixed blessing for medicine. It takes a good deal to compensate for a diagnosis of gastroptosis, a pelvic cæcum or a dropped colon, three "diseases" which we owe to the radiologist. It would not matter so much had not each of these so-called diseases led to the invention of an operation for its cure.

Just as some people have long noses and other have short noses, so some have long stomachs and others have short stomachs, which are nothing more than normal variations from the average (Fig. 1). As in the erect position the stomach swings between the abdominal part of the œsophagus and the point where the duodenal bulb joins the retroperitoneal descending portion of the duodenum, the greater curvature of the short stomach is well above the umbilicus, whilst that of the long stomach may reach into the pelvis. The tone and peristalsis of both being normal, they perform their functions perfectly. I have realised this since I found, 24 years ago, whilst examining a

number of healthy students with the X-rays, that the owner of a stomach reaching the pelvis was one of the strongest forwards in the hospital fifteen, who had never had indigestion in his life. But the radiologist often calls the short stomach hypertonic, though its tone is no greater than that of the long stomach, and he calls the long stomach a dropped stomach, though it has never been higher, the low position of its most dependent part being due to its exceptional length. A long stomach very rarely gives rise to trouble except when it leads to a "gastroptosis complex," or when it suggests the need of a rigid and uncomfortable abdominal support or much more disastrously some form of gastropexy. When a long stomach is associated with very weak abdominal muscles, its greater curvature descends to an unusual extent on assuming the erect position, but, fortunately, the duodenum almost always descends with it. In very exceptional cases the duodenum remains in position so that a definite kink is produced where the elongated duodenal bulb joins the retro-peritoneal descending portion of the duodenum and gastric stasis with consequent dyspeptic symptoms results unless the patient lies down (Fig. 2).



(*a*) (*b*)

Fig. 1—Gastroptosis with duodenal ptosis : (*a*) standing, (*b*) lying.

She complained of griping pain in the lower part of the abdomen with much flatulence. Five years ago she had had some slight eczema, which she was told was the result of intestinal auto-intoxication, and as she was also constipated she was advised to use enemas. As time went on, she became more and more obsessed with the necessity of keeping her colon clean. She took large quantities of aperients, and, in addition, every other day she washed her bowels out by injecting two pints of water twelve times in succession in the vain hope that the water would eventually return quite clear, quite forgetting that with all the aperients she was taking, liquid fæces were always reaching the cæcum from the ileum. Although the proceeding occupied the greater part of the morning and was always accompanied with much pain, she had continued it for five years. The X-rays showed that when she was taking no aperients and having no lavage, an opaque meal passed at a normal rate through the colon and was completely evacuated from her colon. She was encouraged to give up all treatment ; her bowels acted naturally every day and her pain completely disappeared. There was no recurrence of any

(*a*) (*b*)

Fig. 2—Gastroptosis without duodenal ptosis, resulting in kink at junction between bulb and descending part of duodenum : (*a*) standing, (*b*) lying.

By kind permission of Oxford Medical Publications (Hurst and Stewart's *Gastric and Duodenal Ulcer.*)

A young woman, aged 26, was sent to me by her doctor for my opinion as to whether the operation of raising and fixation of the pelvic cæcum, which had been recommended by the surgeon whom she had consulted independently, should be performed. symptoms. I advised her to have the septic remains of her tonsils and her septic teeth removed, and a few days after this was done the eczema which had been present constantly for five years completely disappeared.

In the erect position the cæcum of healthy women is as often in the pelvis as in the right iliac fossa, and even when it makes a permanent home of the pelvis it can be very warm and comfortable there. Yet a pelvic cæcum is still sometimes regarded as an indication for operation, though its fixation in the right iliac fossa may lead to acute kinking of an ascending colon, which happens to be unusually long and so requires the whole distance between the pelvis and the liver to run a straight course.

I have rarely seen the transverse colon travel straight from the hepatic flexure to the splenic flexure except in natives of India. In Europeans it almost invariably forms a loop, the lower extremity of which often lies in the pelvis. A very low transverse colon is a perfectly normal condition which is due to its length being greater than the average; it is strictly analogous to the long stomach. I have never known anybody the worse for a so-called dropped colon, but I have seen several patients with serious symptoms result from various fixation operations, the quaintest being one in which the recti were divided and the transverse colon was placed between them and the skin, so that the patient could himself massage it.

Weakness of the abdominal muscles does not lead to symptoms by causing visceroptosis, but by lowering the intra-abdominal pressure and so upsetting the venous circulation, just as the hutch-rabbit, unlike its wild brother, dies from cerebral anæmia on being suspended by its fore-legs. It is this condition which benefits from abdominal exercises and from an abdominal support, which almost always holds a low stomach or transverse colon down instead of raising it in the manner depicted in the advertisements for belts and trusses.

Adhesions.—Chronic pain in the right iliac fossa has many causes. It is, therefore, not surprising that appendicectomy often fails to cure it. It is unfortunate that instead of recognising the original error in diagnosis, a second error in diagnosis is often made, and the persistence of the pain is ascribed to adhesions. But adhesions after appendicectomy are comparatively rare, and when they occur they do no harm. Similarly when symptoms recur after a gastro-jejunostomy for an ulcer, they are often said to be due to adhesions round the stoma. But these adhesions are rarely of any importance beyond the fact that they hide an anastomotic ulcer, the real cause of the symptoms; the ulcer is often so superficial in spite of the severe symptoms it causes that it can only be recognised when the parts involved are excised.

Adhesions are often diagnosed to explain obscure abdominal pains in the absence of any previous operation. The majority of abdominal adhesions are quite harmless, and, as a rule, the more widespread they are the less trouble they cause. It is true that a single band of adhesions, such as may result from old tuberculous peritonitis, or from inflammatory lesions of any abdominal organ, may cause symptoms by producing chronic and even acute obstruction, which is completely relieved by its division. But such cases are comparatively rare, and the diagnosis in chronic cases should only be made when the X-rays have revealed definite evidence of localised obstruction, which is constantly present and remains unchanged by manipulation under the screen or inflation of the colon with air.

The mere presence of a so-called kink in the terminal ileum or in the colon is of no importance if an opaque meal is not held up behind it; in the vast majority of cases a lateral view shows that the kink is only apparent and due to a radiogram giving a flat picture with no depth. I have also often seen kinks which were supposed to be due to adhesions become completely unravelled, and a terminal ileum or cæcum which was said to be fixed in the pelvis move several inches on inflation of the colon with air.

Some surgeons are difficult to please. If the colon is fixed by adhesions they mobilise it; if it is mobile they fix it. A woman of 26 years had her appendix removed for pain in the right iliac fossa at the age of 17. As the symptoms persisted she was operated upon again two years later and adhesions were divided. When she was 23, another surgeon whom she consulted, operated because, as he wrote to me, "I thought there was some adhesion pinning down the colon." This proved at the operation to be incorrect, and as he thought the bowel was abnormally movable he performed a fixation operation, thus doing exactly what he intended to undo when he advised operation. After this, the symptoms were worse than ever. They proved to be due to excessive use of aperients, the discontinuation of which resulted in the disappearance of the abdominal symptoms.

Mucous colitis.—The function of the mucous cells and glands of mucous membranes is to secrete mucus to protect it from mechanical and chemical irritants. The presence of a layer of mucus round a hard lump of fæces or its presence in the soft or liquid stool produced by an aperient is, therefore, evidence that the mucous membrane of the colon is performing its normal functions. Yet the presence of mucus under these conditions is the reason generally given for diagnosing mucous colitis. Colitis means inflammation of the colon; it can only be diagnosed when mucus accompanies

diarrhœa, which is not caused by an aperient or when it is mixed with pus cells or blood. Under such circumstances, the sigmoidoscope shows that the mucous membrane is inflamed. In the conditions I have referred to in which mucus is a sign of a normally acting mucous membrane it contains no leucocytes or red corpuscles and the sigmoidoscope shows that the mucous membrane is perfectly healthy. As mucus is always present in true colitis, there is no point in speaking of mucous colitis, quite apart from the fact that this term is almost invariably used for a condition in which the patient is either suffering from dyschezia (inefficient defæcation) or is taking aperients in excess.

Sometimes the diagnosis is made on even less adequate grounds. I have recently seen a woman of 45 who became exhausted as a result of severe puerperal sepsis. Mucous colitis was diagnosed without a single stool being seen and without sigmoidoscopy ; she had twelve intestinal douches in London, followed by a course at Plombières. She then developed abdominal pain as well as being fatigued, and was told she would have to remain in bed for six months. We found that there was nothing at all the matter ; when she discontinued the douches her bowels worked normally every day, and with a little psychotherapy in the form of explanation and persuasion she was soon able to walk several miles without fatigue.

Intestinal lavage as a treatment for so-called mucous colitis first became popular at Plombières. As a result of the teaching of Mathieu, who said that he had seen more cases of colitis come from Plombières than ever went there, patients now generally drink the water and bathe in it instead of having it injected into their colons. Unfortunately, whilst intestinal lavage has become less popular in France it has become more popular in England, and what an American author calls a colon laundry has now actually been established in London for the practice of what the same writer refers to as the new indoor sport of washing out the intestines.

Auto-intoxication caused by intestinal stasis.—Under normal conditions the ileo-cæcal sphincter only allows the contents of the terminal ileum to enter the cæcum when complete digestion of the food has taken place. Its importance for digestion in the small intestines is exactly comparable with that of the pylorus for digestion in the stomach, but, whereas nothing is absorbed in the stomach, the products of gastric and intestinal digestion are absorbed in the small intestines. Water is absorbed in the cæcum and ascending colon, from which the fæces are conveyed by mass peristalsis through the transverse and descending colon, which are always comparatively empty, to the pelvic colon, in which the fæces are stored until the time comes for defæcation to occur. Constipation is most frequently due to inefficient defæcation or dyschezia ; less commonly it is due to the slow passage of fæces from the proximal colon to the pelvic colon and still more rarely to stasis in the cæcum and ascending colon, but never to delay in the small intestine. In dyschezia the fæces in the pelvic colon and rectum are too dry for any bacterial activity to occur, and moreover they contain no protein which could undergo putrefaction, so that dyschezia is never associated with any increase in the absorption of toxins, the symptoms to which it gives rise being entirely due to reflex action and local pressure.

The same is true of the commoner form of colonic constipation. Only in the comparatively rare cases in which stasis occurs in the cæcum and ascending colon do the fæces contain sufficient water for bacterial activity to be possible, but even then it is very rare for toxic symptoms to develop, as the quantity of soluble protein present is also very small. Consequently uncomplicated and untreated constipation rarely gives rise to auto-intoxication.

Intestinal auto-intoxication is, however, a very common result of the treatment of constipation and supposed constipation. Among the very large number of patients I have seen because they were supposed to be suffering from the effect of intestinal stasis, I do not remember one who had not for months or years been treated with aperients or, less frequently, with intestinal lavage. Aperients cause the chyme to hurry through the small intestine and pass the ileo-cæcal sphincter before digestion is complete. The material which reaches the cæcum consequently contains not only an excess of water, but a large quantity of undigested or half-digested protein, carbohydrate and fat. Its bulk is so great that the whole colon is filled with semi-fluid fæces, the composition of which is such that it forms a perfect culture medium for bacteria, with the result that putrefaction of proteins and fermentation of carbohydrates occur with great activity. The products of the latter are not of a very toxic character, but the excess of gas leads to intestinal flatulence with abdominal discomfort, colic and the passage of excess of flatus. Many of the products of putrefaction are toxic ; the liver may be capable of destroying or detoxicating them, and the excess which escapes the liver may be excreted by the kidneys. But if the liver or kidneys are not acting perfectly, or if the toxins are absorbed in great excess, a large variety of symptoms result and the familiar picture of intestinal auto-intoxication is produced.

But it is absurd to ascribe this, as has generally been done in the past, to constipation; it is the result of artificially induced diarrhœa.

Directly the patient discontinues to take aperients the symptoms disappear. It is often found that he is not really constipated at all and that his bowels act perfectly, his condition being due to the fear of constipation induced by perusal of advertisements of patent remedies and of the pernicious pseudo-scientific literature which, without the faintest evidence, ascribes cancer and the majority of the ills to which flesh is heir to the bogey of chronic intestinal stasis. The vast majority of those habitual pill-takers who really are constipated can get complete relief by diet, exercises and regular habits. Dyschezia never requires treatment by drugs. The comparatively rare cases of colonic constipation which do not respond to simpler methods should take a quantity of aperient just sufficient to produce a single formed stool a day, instead of a large unformed evacuation after every meal, the production of which is the chief object in life of many men and women at the present day.

Flatulent dyspepsia from gastric fermentation.—Under normal conditions the gastric contents are sterile and no bacterial decomposition takes place within the stomach. This is due partly to the antiseptic action of the hydrochloric acid of the gastric juice and partly to the rapidity with which its contents pass into the duodenum. Under various conditions, some functional and some organic, free hydrochloric acid is absent. The loss of the antiseptic gastric juice results in the appearance of bacteria in the stomach, but as achlorhydria is generally associated with unusual rapidity of evacuation, the absence of stasis prevents bacterial decomposition of the food from occurring. On the other hand, the commonest cause of gastric stasis is pyloric obstruction secondary to duodenal ulcer; this is associated with hyperchlorhydria and hypersecretion, which destroy any bacteria which gain access to the stomach. Only when gastric stasis and achlorhydria are associated together as a result of pyloric cancer are the conditions present in which fermentation and putrefaction can occur, and foul eructation is consequently a characteristic and sometimes very early symptom of this disease.

Flatulent dyspepsia is, however, extremely common. It is ascribed by the patient and sometimes by his doctor to fermentation, for which antiseptics are often prescribed. But if the contents of the stomach at the height of an attack of flatulence are removed, they are found to evolve no gas on incubation; the flatulence is always the result of aerophagy. The patient has some slight epigastric discomfort which he ascribes to excessive gas production, and in his repeated attempts to get rid of it he swallows air.

When at last a large quantity has been swallowed, a noisy explosion takes place and the accumulated air is brought up, this welcome result acting as a stimulus to further futile efforts to eructate with the consequent re-accumulation of air in the stomach. The condition can be cured, not by irritating antiseptics and freak diets, but by dealing with the primary cause of the discomfort which gives rise to the idea that wind is present, and by explaining to the patient the process of aerophagy, which disappears as soon as he gives up all voluntary efforts to eructate.

Current Cases—I.

A Case showing a definite connection between Vaso-Vagal Attacks and Genuine Epilepsy

THE following interesting case was seen recently at Dr. Symonds' Out-patients.

E. B., a married woman aged 40 years, is the second of a family of 15, of whom eight died in infancy from causes unknown to the patient. She has six sisters alive, all of whom are in good health. The patient's father suffers from asthma and her mother died at the age of 40 of cancer. No psychopathic history could be obtained in any branch of the family.

As a child the patient had suffered from diphtheria, measles and acute nephritis, and between the ages of 7 and 15 years she was subject to intermittent attacks of chorea. Occasionally she had severe headaches, but with no sensory prodromata or vomiting such as might have suggested migraine. She has never had an accident except 12 months ago, when her ulnar nerve was cut by a piece of glass.

History of attacks—Six years ago, when the patient was 34 years of age, she had her first attack. She had another six months later, and gradually they became more frequent, until 12 months ago, when she was having, on the average, two every month. She then came under treatment with bromides and the attacks ceased for nine months. Occasionally she would have a slight sensation as if an attack were about to commence, but these did not materialise.

During the last three months she has had three attacks, and, for the first time, the epilepsy was absent on two of the occasions. With the above

exceptions, the attacks have always been of the same nature and a description of them follows.

The patient first experiences a sudden suffocating pain, which starts in a narrow band from under the left breast to the lower end of the sternum. Immediately passing rapidly up the left border of the sternum it reaches the root of the neck and then spreads along the left shoulder and down the outer aspect of the left arm as far as the elbow. She feels as if death is imminent and is forced to stand still until the pain starts to die away, which gradually it does after about a minute has elapsed. The patient then becomes conscious of exaggerated cardiac action, which, with the last of the pain, disappears in from 5 to 10 minutes. A feeling of extreme lassitude then supervenes, this being accompanied by drowsiness, but with no mental confusion. These attacks occur without any prodromal symptoms and with none of the precipitating factors common to angina pectoris. The majority of them have come on when the patient has either been seated or performing some minor domestic task.

It is interesting to note that they have always occurred at about 3 o'clock in the afternoon, and until she came under bromide therapy a year ago, were always the same night followed by epileptiform convulsions.

While still in the tired drowsy state which follows the vagal attack, the patient falls asleep, and between the hours of midnight and 3 a.m. undergoes typical epileptiform convulsions. In these she has bitten her tongue, become cyanosed and voided urine.

As a rule she has three of these fits with an hour between each, and in the interval she has asked for the means and has performed the acts of micturition and defæcation. Of this there is complete amnesia and she wakes the next morning with severe frontal headache, is mentally confused and complains of extreme lassitude. The latter lasts about a week before recovery is complete.

On Examination.—The patient is a moderately intelligent, well-nourished woman, who co-operates well and seems anxious to get to the bottom of her complaint. She is normally of a cheerful disposition, and although she has been married for six years she has never become pregnant. This, however, does not worry her very much although she would like to have a child.

Nervous System.—The only abnormal physical signs which could be detected were comparative weakness and anæsthesia corresponding to her ulnar nerve lesion.

Cardiovascular System.—This was thoroughly investigated by Dr. Campbell who was of the opinion that her heart was not responsible for the anginoid pains.

There was slight left ventricular enlargement on X-raying the heart, and electrocardiography showed a corresponding inversion of T3. The electrocardiograph was otherwise normal. The Wassermann Reaction was negative, and at the time of examination her blood pressure was 120mm. Hg. systolic and 80 mm. Hg. diastolic. All her other systems were normal.

Commentary.—Gowers* first grouped under the heading of vagal and vaso-vagal attacks, a variety of phenomena which had been commented on previously by various writers.

These varied from vagal attacks—such as in the case described above—to others, in which involvement of the vaso-motor system resulted in rigors with coldness, tingling and numbness of the extremities. Gowers put forward the theory that these attacks were related to epilepsy and he pointed out that if an aura or minor epileptiform attack were much prolonged, many of the features exhibited would coincide with the phenomena experienced in these vaso-vagal attacks.

One case he quoted in which epileptiform fits were followed by vagal symptoms and another in which vaso-motor disturbance was noticed as well.

The case under consideration is therefore of considerable interest as there is also here established a definite connection between vagal and epileptiform attacks. In this woman it would appear that the vagal attacks occur as a very much prolonged Aura of the fit, which, until recently, so constantly followed. Moreover, the symptoms of both ceased when the patient came under treatment with bromides 12 months ago.

Finally, I am indebted to Dr. Symonds for permission and assistance in publishing this case, and to Dr. Campbell for carrying out the cardiac investigations.

J. M. R.

*" Borderland of Epilepsy." Gowers. Published by Messrs. J. & A. Churchill, 1907.

Guy's Hospital Gazette

(ESTABLISHED 1872)

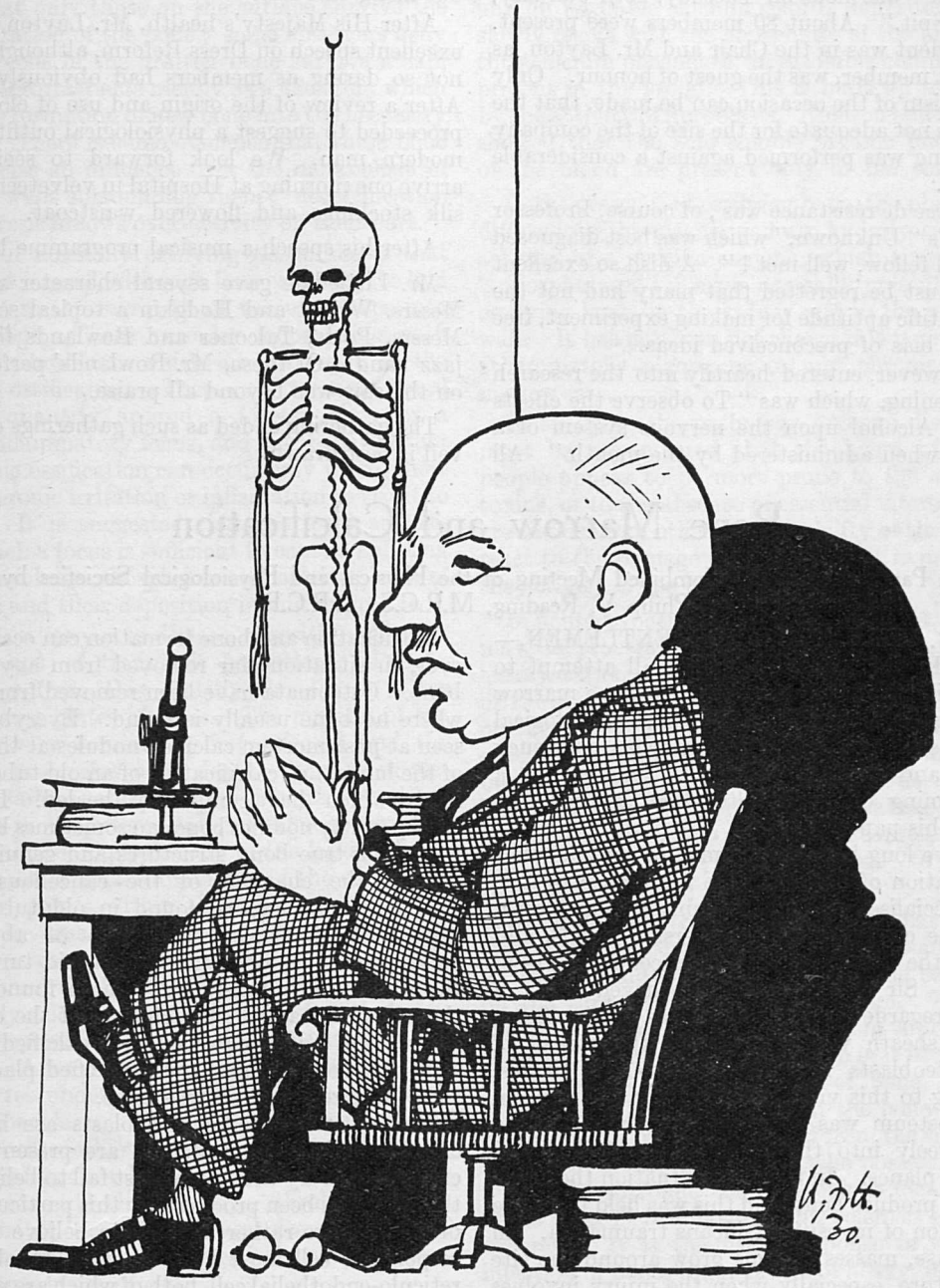
Published on alternate Saturdays. Price **9d.**

Editorial and Publishing Office :—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, **12s. 6d.** Post Free, payable in advance.

A Journal of Hospital News, Medicine, Surgery and Dentistry

BOROUGH TYPES—III.



T. B. J., 14, St. Thomas's Street

Physiological Society's Annual Dinner

THE Annual Dinner of the Physiological Society—a function which was reinstated last year—was held on Tuesday, 28th January, in the "Spit." About 80 members were present, the President was in the Chair and Mr. Layton, as the oldest member, was the guest of honour. Only one criticism of the occasion can be made, that the space was not adequate for the size of the company and serving was performed against a considerable handicap.

The pièce de résistance was , of course, Professor Pembrey's "Unknown," which was best diagnosed as "Snail fellow, well met!" A dish so excellent that it must be regretted that many had not the true scientific aptitude for making experiment, free from the bias of preconceived ideas.

All, however, entered heartily into the research of the evening, which was "To observe the effects of Ethyl Alcohol upon the nervous system of a mammal when administered by the mouth." All present may be heartily congratulated on the thoroughness with which experiment was carried out along this line.

After His Majesty's health, Mr. Layton gave an excellent speech on Dress Reform, although he was not so daring as members had obviously hoped. After a review of the origin and use of clothes, he proceeded to suggest a physiological outfit for the modern man, We look forward to seeing him arrive one morning at Hospital in velveteen shorts, silk stockings and flowered waistcoat.

After his speech a musical programme began.

Mr. Littledale gave several character sketches, Messrs. Wright and Hodgkin a topical song, and Messrs. Potts, Talconer and Rowlands formed a jazz band. Of these, Mr. Rowlands' performance on the saw was beyond all praise.

The gathering ended as such gatherings do and a veil is best drawn.

Bone Marrow and Calcification

A Paper read at the Combined Meeting of the Physical and Physiological Societies by Philip V. Reading, M.R.C.S., L.R.C.P.

MR. CHAIRMAN AND GENTLEMEN,—In this short essay, I shall attempt to illustrate the physiology of bone marrow by discussing some of its reactions to pathological processes such as infection by organisms, deficiency diseases and new growth. Its function as a blood-forming organ is altogether outside the scope of this paper.

We have long been accustomed to consider that the formation of bone was the function of a few, highly specialised cells, the osteoblasts, which lived within the confines of the Haversian canals, and amongst the trabeculæ of the cancellous parts of the bone. Sir William McEwen believed firmly in this and regarded the periosteum as a thick fibro-vascular sheath which prevented the spread of these osteoblasts into the neighbouring tissues. According to this view, when a bone was broken, the periosteum was torn and osteoblasts would escape freely into the neighbouring fascial and muscular planes. In their new situation they continued to produce bone, and this was held to be the explanation of myositis ossificans traumatica. In this disease, masses of bone grow around the site of a fracture, especially when the injury involves the region of the elbow, when the brachialis anterior muscle may become the seat of so much bone formation that complete flexion of the elbow becomes impossible.

Calcification and bone formation can occur, however, in situations far removed from any normal bone. Osteomata have been removed from places where no bone usually is found. Everybody has seen at post-mortem calcified nodules at the apices of the lungs, *i.e.*, calcification of an old tuberculous focus which has completely healed. In these chalky, gritty nodules bone can sometimes be found, possessing true bony structures and genuine marrow in the channels of the cancellous tissue. Similarly bone can be found in old tuberculous mesenteric glands, in the scars[1] of abdominal incisions and in long standing fibroid tumours of the womb, more rarely has it been found in the thyroid gland and in the choroid of the eye. In the walls of atheromatous vessels calcified plaques are fairly common and these calcified plaques are sometimes replaced by true bone.

Unless true, specific osteoblasts are normally circulating in the blood, and are present in the crevices of every tissue, we must fail to believe that this bone has been produced by this particular type of cell, we are rather inclined to believe that the responsible cell must be a modified fibroblast, or reticulo-endothelial cell, both of which are universal throughout most tissues of the body.

Two French investigators, Leriche and Policard, after an exhaustive research lasting ten years, came to the conclusion that the so-called osteoblasts

were but modified cells of fibroblastic type, which became immured within the layers of bone which were deposited around them during the growth of the bone. Further, when the fate of these osteoblasts in a bone graft is considered, it is generally agreed that only those on the surface survive the transplantation of the bone ; some observers deny that any cells in the grafted bone survive at all, and that the graft acts merely as a skeleton, which guides the formation of new bone into the necessary position. There is some evidence that these bone cells exercise an influence over the metabolism of the bony walls surrounding them ; decalcification or halisteresis follows over-activity on their part.

Study of normally ossifying tissue shows that bone is not formed, although lime salts may be laid down, before the ingrowth of vascular loops into the cartilage. These vascular loops bring with them the fibroblasts which are necessary in the process of ossification. These capillaries are found in great quantity around a foreign body or a chronic inflammatory focus, and it is believed that heterotopic ossification can occur only where there is some chronic irritation or inflamation to stir it to activity. It is suggested that the local acidosis around such a focus is sufficient to cause a splitting up of the soluble phosphates and calcium salts of the blood and their deposition in and around it.

There is a very rare disease, myositis ossificans[2] which is not of traumatic causation. People, who suffer from this malady develop in their muscles large plates of bone. The muscles of the back are very commonly first affected and the condition progresses until death occurs from respiratory failure and pneumonia, due to bone formation in the intercostal and other respiratory muscles. Microscopical study of the lesions shows that the first step is a dilatation of the capillaries at various points within the muscle, and this is followed by small, scattered hæmorrhages. For some unknown reason, this excites vigorous ossification around the blood. This process is repeated continually till the muscle is almost entirely replaced by such bony plates. It has been suggested by some American observers that the actual erythrocytes undergo a transformation into bone forming fibroblasts. This is extremely improbable, if it is not altogether impossible. It is difficult to believe that such a highly specialized cell as the erythrocyte could change into a fibroblast. It is more probable that the observers drew a mistaken conclusion from the appearance in intimate contact of these two types of cell.

The formation of bone in an atheromatous plaque in the wall of the aorta is explained by a very ingenious theory. It is well known that these atheromatous nodes contain some amount of glycerol and cholesterol esters. These are readily hydrolysed, and liberate soluble glycerol and cholesterol. The freed fatty acids form soaps with the various bases normally present in the blood stream and tissues ; calcium is amongst these bases and an insoluble calcium soap is deposited. This slowly reacts with the phosphates of the blood and thus calcium phosphate, an insoluble compound, is present in the lesion. This is built up into bone by the activity of fibroblasts. Robison and Soames[3] showed that the acid soluble organic phosphates of the blood are present only in the corpuscles.

In the presence of ossifying bone, the phosphates diffuse into the plasma and are hydrolysed by the activity of a specific enzyme, which they termed " phosphatase." This is normally present only in ossifying bone, in the kidney and in the intestinal wall. It has not been yet shown if it is present in atheromatous plaque or in any chronic inflammatory site.

In studying the pathology of bone diseases, it must be remembered that the bones of certain people appear to be more prone to the action of toxins, or to the absence of essential vitamins than are the bones of others. The ability of the bone to react to the damage inflicted upon it is judged by the activity of the bone-forming cells.

In acute pyogenic infections, so acute and rapid may the process be that odema of the marrow and extravasation of pus press the nutrient arteries of the marrow against the rigid, unyielding walls of their bony canals and thus cause rapid and extensive anæmia and death of a large part of the bone. In milder infections, or in a host with a better response to infection, the invading bacteria become shut up within a very dense capsule of bone, within which they barely manage to survive (Brodie's Abscess).

In cases where the shaft of the bone has suffered extensive necrosis, a sheath of new bone is laid down all round it by the bone-forming cells lying on the surface under the periosteum. This new sheath is known as the involucrum and the old shaft is discharged through cloacæ in it in the form of sequestra. In tuberculosis of bone, there is usually such little reaction that the bone becomes rarefied and is rapidly removed from the site of the infection. Some individuals, who possess a better resistance, surround the tuberculous focus with a dense layer of new bone. This sclerosis is rare in tubercle ; it is the usual response in syphilitic infection of bone, where layers of heavy, dense and sclerosed tissue are deposited throughout the bone and especially under the periosteum.

Everyone is familiar with these changes, but there is a group of conditions, not so well known,

which possess a similar pathology, *i.e.*, Paget's disease, fibrocystic disease and osteomalacia.

Although Paget gave his name to the disease (4, 6, 7, 11), now sometimes known as osteitis deformans, it is interesting to note that actually the first case was described by Dr. Wilks, who, I need hardly remind you, was a physician at Guy's Hospital. The symptoms of the disease are pains in the bones, followed by softening and thickening of the shafts of the long bones or of the bodies of the vertebræ. While the bone is soft, it yields to pressure and to traction, so that bowing of the thighs and legs, kyphosis and apparent lengthening of the arms take place. Later a profuse deposition of calcium salts restores to the bones their normal hardness and fixes them in their deformed shapes. The skull is often affected, the cranial vault becoming $\frac{3}{4}$ in. to an inch thick. Examination of the bones in the early stages shows they are more vascular and are much thicker than normal. They are soft and may be easily cut with a knife. The vascularity and softening indicates that the bones are undergoing halisteresis. The thickening and hardening which occurs later indicate that the balance has swung in the other direction and that excessive bone formation is proceeding. That this is not normal bone may be seen by the naked eye in post-mortem specimens, where the cut surface presents a homogeneous appearance which has been likened to limestone. Microscopically, also it is seen that the true architecture of the organ has been completely replaced by a mass of strands of fibrous tissue impregnated with calcium salts, chiefly calcium phosphate. Biologically, this tissue is inferior to bone, and indicates a low level of activity in ossification. This disease occurs almost exclusively in elderly men, and causes great pain and disability. The end is only too often hastened by the appearance of a sarcoma in one or other of the limbs.

Closely related to this is the condition known as fibrocystic disease (6, 8, 9, 10). This occurs in young people, especially at about the age of puberty. Sometimes the cyst occurs following a blow or other local trauma. The cyst is slow growing and usually appears within the end of a long bone, the neck of the femur or of the humerus. The cyst grows from the medulla of the bone and gradually expands the cortex; the bone may become so weakened that it fractures, when it is exposed to such slight violence as turning over in bed. Good reunion will occur at the site of such a spontaneous fracture.

The pathology of this condition is believed to be an halisteresis following poor regulation of the bone metabolism by the bone cells lying in the Haversian canals. The naked-eye appearance varies. The cyst may resemble a very hæmorrhagic growth of the bone, or it may be completely empty, with a little cellular lining around its walls. The microscopical appearance also varies; in the early stages there is erosion of the bone by a vascular, young connective tissue. As bone absorption becomes more complete, the stroma grows myxomatous and hæmorrhages occur into its substance. In this way the stroma is gradually removed and the lesion becomes more like a cyst. It is very interesting to note that giant cells, similar to those found in giant-celled myeloma, are present in some part of the cyst. The lesion may be single or it may be multiple, affecting every bone of the body and giving rise to great distortion of the skeleton and to Bence-Jones albumosuria. The early microscopic appearance is identical with that found in Paget's disease, the final microscopic picture is the same as osteomalacia, and in the intermediate stage it very closely resembles giant-celled myeloma.

An interesting case has recently been reported by Drennan[10], in which an autopsy upon a woman suffering from this disease showed the lesions to be present in nearly every bone of the body and also an enlarged parathyroid gland. Unfortunately records of blood calcium and calcium content of the urine have not been compiled in this disease.

Osteomalacia is rare in this country; it is more common on the Continent and in China. Cases have been recorded in men, but it usually occurs in women, especially pregnant women. All the bones of the body become exceedingly soft, and gross deformities result, if the patient survives the acute phase of the disease. The triradiate pelvis, produced by osteomalacia, is characteristic; the softened lateral walls are crushed together by the force of the heads of the femora, the sacrum bends forward and the pelvis becomes beaked. The outlet of the pelvis is reduced in severe cases to a narrow gap of the shape of an arrow-head. The obstruction offered to the passage of the fœtal head is absolutely impassable. Delivery can only be obtained by cæsarean section. Microscopically the bone is seen to undergo a very rapid decalcification, with but little attempt at forming fresh bone or even osteroid tissue. The microscopic picture is like that of fibrocystic disease in its earlier process—finally only a thin shell of bone is left, surrounding a fatty and cystic marrow, so that fractures and bending can occur very easily. An enlarged parathyroid has been found also in this condition, but not with any constancy. The advent of pregnancy and the demands of the fœtus for lime salts to provide for its own bones both severely aggravate the condition, and in many cases appear to precipitate it. Hypofunction of the adrenal

capsules and hypofunction of the ovaries have both been blamed for producing this disease.

Oophorectomy has effected arrest of the disease, but probable only because by this operation pregnancy is terminated and the danger of future pregnancies is avoided. Rather it seems more logical to believe that this disease is of the same ætiology as Paget's disease and fibro-cystic disease; especially as specimens of bone have been prepared showing the changes of osteomalacia in one part and those of fibro-cystic disease in another. The view here expressed is that these three diseases are all due either to a toxin of metabolic or intestinal origin or to the lack of some vitamin or endocrine secretion. Most people are not predisposed to these changes or their bones are able to withstand the attacks made upon them. If this resistance is good, harm may be avoided until old age comes on with its atheromatous vessels, poor oxygenation of the tissues and general lack of resistance; if their resistance is less good, the results of the damage appear in early adult life as fibrocystic disease; if their resistance is negligible, osteomalacia results.

Rickets[12, 13] present clinical manifestations which are so well known that they need not be described at any length. The disease, may, for convenience, be divided into three stages:—

(1) The beginning stage. The babies, between the age of six months and two years are pale, anæmic and fat. Their muscles are soft and flabby, they have pot-bellies. They are very prone to infection of any of their mucosal surfaces and often suffer from diarrhœa with vomiting, coryza, otitis media, bronchitis or adenoids. They sweat around the head, and they are usually placid, quiet children who will thrive on any food which is given to them. For this reason, they are usually described as beautiful babies, and often win prizes at baby shows.

(2) During the next stage, the florid stage, the disease makes rapid progress. The epiphyses, especially of the wrists, ankles and knees become swollen, the costo-chondral junctions show "beading." The skull becomes square from overgrowth of bosses of bone around the anterior fontanelle, the closing of which is delayed beyond the usual eighteen months; the back of the skull becomes thin—"craniotabes." The bones are soft and are easily bent—if they fracture a "greenstick" fracture results. If the child is old enough to walk, bending of the femora and tibiæ occur; if it can only crawl, the forearm bones are also bowed. In an infant a scoliosis develops, because the spine is continually bent to one side when the child is carried on the arm of its mother. During the—

(3) Third stage—that of healing—masses of osteoid tissue are laid down and the bones grow harder and become fixed in their deformed shapes.

An autopsy upon a child in the active stage of rickets shows the bones to be soft and easily cut with a knife. The epiphyseal line of cartilage is broad, soft, irregular and of a grey colour. The diaphysis is thickened by an excess of spongy subperiosteal bone. Microscopical examination of the epiphyseal line shows that the cartilage has not been adequately calcified prior to its invasion by capillary loops from the marrow of the metaphysis. The cartilage cells are not arranged in columns nor are they regularly enlarged. There there is no calcification of the cartilage, the capillaries grow rapidly into it and form around themselves masses of tissue resembling bone in appearance but lacking in calcium. Tongues of cartilage may project far back into the metaphysis and become eventually converted into osteoid tissue. Such true bone as is formed is surrounded by a zone of this osteoid tissue. These microscopical changes account for the thickness and irregularity of the epiphyseal lime. Osteoid tissue is deposited in excess also under the periosteum and gives the bones their bulky appearance. Capillaries invade the cartilage of the actual epiphysis and are arranged in parallel lines throughout its substance; the cartilage looses its typical blue appearance and becomes yellowish. The whole picture has been summed up by one writer in saying—"There is an excessive preparation for ossification and a defective accomplishment of it."

The essential biochemical change in rickets is a diminution of the inorganic phosphate of the blood. The normal phosphate content of the blood in children living in temperate climates is highest in the late summer and then falls steadily to its lowest level in March, returning again to its high level during the summer. The low level found during the winter months may be raised by exposing these children or their food to ultra-violet light. This suggests strongly that the variation must be due to the amount of ultra-violet rays which reach the children in the sun's rays.

It has been found that in rickets the absorption of calcium phosphate from the food is defective. The effects of adding or removing large amounts of calcium salts (other than the phosphate) from the diet merely upset still further the amount of calcium phosphate being absorbed; in other words the calcium and phosphate radicles must be in the correct proportions to one another.

It has already been mentioned that foods, especially animal oils which have been exposed to ultra-violet light, will prevent rickets or cure it. The natural product, cod-liver oil, owes its efficacy

in curing rickets to the amount of vitamin D which is contained in it.

Vitamin D cures rickets because it aids in some unknown way the absorption of Calcium Phosphate from the intestine. Too little animal oil and too much carbohydrate are the usual faults of dieting which poor people practice, because carbohydrate food is cheap and animal oils are expensive.

The parathyroid glands have been found enlarged in autopsies upon cases of active rickets and it has been suggested that this is an attempt on their part to cause calcium deposition in the soft bones. Experimental removal of the parathyroids causes halisteresis, low blood calcium content, and consequent tetany, and a raised output of these salts in the urine. It is believed that the enlarged parathyroids are attempting to prevent the mobilization of the bone calcium to restore the blood calcium to normal; this, of course, is only theroretical, but it would appear to be an intelligent response on their part.

I have left the discussion of bony neoplasm to the last, because of all the obscure bony diseases, they are the most difficult to understand. In the bone marrow are two cell types capable of giving rise to new growth—those cells involved with the functions of the bone and those whose duty lies in blood formation.

True benign tumours of bone are relatively common and of these I shall consider two only: multiple chondroma and osteoclastoma.

Multiple chondromata[14] appear during childhood and are often congenital. Records have been made of families in which multiple chondromata of the spine, of the ribs and of humerus have occurred. In these cases a familial disturbance of the formation of bone from cartilage has been postulated. Rickets is undoubtedly a predisposing factor in chondromata and osteomata growing from the epiphyseal line. It is believed that displaced islets of cartilage in the thickened epiphysis are responsible; this is born out by the fact that these tumours cease to grow as soon as full skeletal development has occurred; *i.e.*, as soon as all the other epiphyses have been completely ossified.

Osteoclastoma[15] is a neoplasm derived from mesoblastic cells which have become specialized to the function of bone destruction. The tumour occurs in the ends of long bones, particularly the lower end of the radius, and forms a steadily growing, painless mass. If the tumour be completely curetted, no recurrence will occur, and the growth will have been eradicated. Confined, as it is at first, within the expanded ends of the bone, curettage is very successful in the early stages. Later, however, the growth erodes the cortex and amputation of the affected limb is the only treatment of any value.

Microscopically, the tumour is seen to consist of a fairly dense, spindle-celled stroma in which are embedded the osteoclastic giant cells which give their name to the tumour. These cells vary in size, but the larger ones are quite typical, having a dozen or more nuclei studded evenly throughout the protoplasm. To the naked eye the tumour is composed of a yellow, gelatinous substance, in which are scattered granular masses of old and recent blood clot. The X-ray appearance of the tumour is also considered characteristic—a clear space in the end of an expanded bone, the clear space being traversed by fine, shadowy trabeculæ.

Although the growth may erode the cortex of the bone, it is only locally malignant, it is very rare that such a tumour gives rise to pulmonary metastases as do the other bone sarcomata. In those cases where blood-spread dissemination occurs, the giant cells and spindle cells are reproduced in the secondary deposit. It is interesting to note that in dissection of benign giant-celled tumours removed by amputation, the tumour cells can sometimes be seen growing into the lumen of the veins of the tumour. Why metastasis does not occur more frequently is inexplicable, unless we assume that the tumour cells have little or no resistance to the aggressions made upon them by the blood and tissue cells.

It will be remembered that in fibrocystic disease we have a similar histological picture, and the influence is easily seen, that they are diseases with a similar ætiology. Osteomalacia closely resembles fibrocystic disease and we have here an interesting pathological series. Beginning with osteomalacia, a deficiency disease, we have in the same series, fibrocystic disease and osteoclastoma, the latter being a frank neoplasm. Although this has never been fully explained, it would seem to throw a sidelight on the ætiology of neoplastic diseases, *i.e.*, deficiency of some vitamin from the food.

The most common malignant growth is undoubtedly secondary carcinoma, especially from a focus in breast, thyroid, tonsil or in the kidney. These secondary deposits cause rapid destruction of the bone around them, and there is very little reaction in the form of sclerosis to be observed. Secondary cancer of the prostate is an exception to this rule, and it is invariably the site of much dense new bone formation. Kaufmann believes that the cancer cells actually function as osteoblasts, but grave doubts about the value of this observation have been expressed by many writers.

Primary malignant tumours of bone and bone marrow may be subdivided thus:—

From the mesoblastic tissues whose potential function is the construction or removal of bone an osteogenic sarcoma develops. From the meso-

blastic tissue, whose function will be the formation of blood cells and blood vessels, various types of myelomata and endotheliomata develop.

Amongst the tumours, osteogenic sarcoma is the most frequent, the most important and perhaps the most difficult tumour to understand, owing to the pleomorphism of its microscopical appearance. An attempt has recently been made to classify these tumours in a rational morphological basis (American Bone Sarcoma Registry). In this the divisions are :—(1) Medullary and subperiosteal, (2) Periosteal, (3) Sclerosing, (4) Telangiectatic, (5) Fibro-sarcoma—Medullary or Periosteal, (6) Parosteal. Osteogenic sarcoma attacks people below the age of thirty; indeed, those occurring in people of fifty or over are almost always associated with Paget's disease.

An embryological ladder may be conceived in which the lowest rung is the unspecialised mesenchyme cells, the middle rung the fibroblasts of more specialised and less potential functions and the highest rung the highly differentiated osteoblast. An osteogenic sarcoma may be derived from any one of these mesenchymatous steps, and although the original type of cell responsible for the neoplasm may predominate throughout, some parts of the growth will show cells of more primitive or more adult type. For instance, a peculiar type of chondroma has been described, occurring usually about the greater trochanter of the femur. Here the greater part is composed of innocent neoplastic cartilage, malignancy is often confined upon the growth by the presence in it of less highly differentiated cells at the periphery.

This cellular pleomorphism is one of the characteristics of osteogenic sarcoma and has been the cause of this erroneous classification into small and large round-celled, spindle-celled and giant-celled sarcoma. To name a growth after its predominant cell type is of as little value as to name it after the tissue, which it produces, *i.e.*, the old names of osteo-sarcoma and chondro-sarcoma. The important point to be appreciated is the malignant potentiality of the tumour cell and this is best done by determining the degree of specialisation of function to which the cell has attained, or to which it has degenerated by anaplasia. For this reason a sarcoma composed of small round cells is more rapidly fatal than one containing cartilage, because the potentialities of its cells have not been realized in any direction.

The appearance of giant cells in sarcoma of bone has long been the subject of much discussoin. Osteoclastoma is not being considered here. Research has shown that the multinuclear giant cells observed are often really foreign body giant cells, or granuloma giant cells, and this presence is the normal reaction of the body tissues to blood clot, dead matter and infection. All of these are often produced by an exploratory surgical incision of a tumour. The only malignant giant cell known is a large shapeless mass of protoplasm with a single, rapidly dividing nucleus in the middle.

The intercellular substance of these tumours may be fibrous, hyaline, myxomatous, cartilaginous, osteoid or osseous. The latter type of matrix has often the appearance of true bone and is termed lamellar bone, to distinguish it from the irregular trabeculæ of osteoid tissue. Bone can be formed in these growths by two methods.

The first is known as metaplasia. Granules staining deeply with hæmatoxylin appear in the homogeneous ground substance of the sarcoma. The granules are arranged concentrically around the cell, and eventually they fuse to form rings of calcareous matter surrounding clear spaces in which lie the tumour cells. The second method is that of neoplasia, in which the tumour cells and proliferating fibroblastic and endothelial cells become arranged in strands, in the meshes of which calcium salts are precipitated. The separation of these types, one from the other is really an artificial morphological distinction. Of the biochemical changes involved we are completely ignorant.

It is an interesting fact that even the most rapidly growing sarcoma respects the boundaries of the hyaline cartilage of the epiphysis and of the joint surfaces. Sarcoma usually occurs either in the lower end of the femur, or the upper end of the tibia and rapidly erodes the cortex of the bone and extends more rapidly along the medulla of the bone. The reaction of the bone consists in sclerosis in the path of the advancing cells, but eventually the sarcoma pierces the cortex and grows under the periosteum, finally piercing that and spreading into the neighbouring tissues. As the periosteum is lifted off the surface of the bone by the growth, it draws with it the vessels which pass from its deep surface into the cortex. These vessels normally lying within the canals of Volkmann, have bone-forming cells closely attached to them, and as the vessels are drawn away from the bone, these osteoblasts continue to produce bone in this new situation. This explains the sun-ray appearance which is seen in the dried museum specimen. In X-ray photographs these radiating spicules of bone may be seen at the lower end of the femur, extension along the medulla proximally has been more rapid and cannot be demonstrated by the X-ray, so that a photograph is a very fallible guide to the extent of an osteogenic sarcoma.

Ewing has recently described a type of growth occurring in the middle of the long bones. It is

found in young people and has a characteristic clinical course not unlike that of subacute osteomyelitis, with which it is often confounded by the operating surgeon. The growth microscopically consists of a mass of small, polyhedral cells, with round nuclei, closely packed in syncytial sheets. There is no intercellular substance and for this reason the cells are suspected of being the very lowest type of mesoblastic tissues. Degeneration often occurs, leaving the better nourished cells lying around the vessels in mantles; this is by no means a peculiar appearance, it occurs in many tumours, sarcomatous and carcinomatous. The growth shows a great tendency to spread up and down the bone and gradually erodes the cortex. Subperiosteal sheaths of new bone are laid down parallel to the shaft in an unavailing attempt to stem the progress of the tumour. The expansion of the bone with its parallel longitudinal striæ are characteristic X-ray findings in these cases. Towards the end, multiple metastases occur in other bones and death is the invariable termination of the condition. Its histogenesis has been already suggested, but it is made more obscure by the frequent occurrence of plasma cells and of a lymphocytic infiltration.

Myeloma occurs most commonly as a multiple tumour in the marrow of many of the skeletal bones. The softening of the bone, which it produces, gives bending and great distortion of the whole skeleton. The histological character depends on the cell type from which it arose; thus it may be a myelocytoma, lymphocytoma or erythroblastoma and all these three have been described by various authors. Strangely enough myeloma is most frequently composed of a cell identical with the plasma cell. The origin of the plasma cell is still one of the mysteries of pathology, so that at present no satisfactory evidence can be given concerning its presence in these tumours.

I am only too well aware that a multitude of important and interesting diseases, such as osteogenesis imperfecta, fragilitas ossium and achondroplasia have been omitted. A time limit has, however, of necessity been imposed upon us, and it is this and not ignorance of their value in such a discussion as this that causes me to neglect them.

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Life in the I.M.S.

A STEREOTYPED official advertisement setting forth in bare language terms of service, pension and the rest, gives the prospective entrant to a Government service but little of the information any prudent man would demand, ere he committed himself to a career overseas. This is no doubt of necessity so, for state departments cannot adopt the methods of the professional advertiser.

A brief account, therefore, of the life of an officer in the Indian Medical Service—by one well content with it—may perhaps be of value to any newly qualified Guy's men who have reached that critical stage where house jobs are coming to an end, and the problem of making a livelihood looms large.

Between your true pioneer who will volunteer for polar expeditions and explorations in darkest Africa, and the stay-at-home who is content to carry on in the same surroundings all his life, there exists an intermediate type to whom the idea of service in India must have a very strong appeal.

Here is romance, colour, the glamour of the East (which really does exist), coupled with ice, electric fans and mosquito-proof bungalows. In a word, the European has had time to "dig himself in," and to organize a life which, with climatic modifications, remains much what it would be at home.

What may the medical man look to as a career in the service?

He will, on first appointment, undergo a preliminary—and highly instructive—course at the R.A.M. College, Millbank.

This, being taken in conjunction with junior officers of the R.A.M.C., includes such subjects as Hygiene and Military Surgery, Pathology and Tropical Medicine.

To those who are wont to imagine that doctoring in the Army is frankly a washout, the sheer

efficiency of the teaching together with the military punctuality—(Oh ! those draughty waits in the Colonnade) will come as a welcome surprise.

After an examination, he will depart to Aldershot, where a couple of months are spent learning the elements of drill, horsemanship—good fun this —and general military duties.

Thence, after a spot of leave, to India. It is the rule on first joining that an officer is posted to one of the larger stations and is left undisturbed for at least a year.

He is thus able to feel his feet under the guidance of more senior officers, to learn the manners and guile of the Indian troops, and put in time with the *Munshi* (native Hindustani teacher) in order to pass the obligatory language exam.

His duties will consist in running the morning sick parade of an Indian regiment, which occupies an hour or so before breakfast, the best time of the day, and then to hospital where he will be allotted one or more wards of which he will have sole medical charge.

If he has any special bent or previous experience in some special line, *e.g.*, surgery or laboratory work, there will be, as a rule, every encouragement to pursue it, for contrary to popular belief a high professional standard is looked for, whilst the slacker finds himself in great demand for route marches, train duties and other such military "chores."

Consultants are always available and the beginner in tropical medicine will learn much from them and from his own researches in the laboratory.

Study leave, to which every officer is entitled, gives him a chance to take up some special branch on his first leave home, and on producing evidence of satisfactory work, counts towards accelerated promotion.

The future of any officer in the I.M.S. will naturally depend in a large degree on his personal tastes and predilections.

He may elect to remain in the military branch, and there is an increasing tendency to do so, since of late years the possibilities of doing really good professional work have greatly improved since the adoption of the central hospital system.

To others a political career may appeal. This generally involves a lonely life on some post on the Persian frontier during the early years, where consular duties are combined with medical work ; but many plums are to be had as Residency Surgeon to some Indian State, and to the lover of the real India, few careers could be of greater interest.

Posts as Civil Surgeon, often combined with professional duties at one of the smaller medical colleges, offer a wealth of variety of clinical work that is almost unbelievable. The opportunities of obtaining civil employment have been recently increased, and there is now an excellent prospect of any officer who is capable and desirous of taking a civil post being able to do so. Private practice is not, it is true, so lucrative as in the old days, but it still forms a very substantial addition to income.

Lastly to the man with a qualification and a bent for the work, pathology, hygiene and research offer many opportunities, both in civil and in military employ.

Excellently equipped laboratories are to be found in every large military station, centres for antirabic treatment are scattered throughout the country, officers are often required for antimalarial and other investigation.

The question of pay is naturally of great importance, for a rate in rupees is of no guidance unless one has a notion of the cost of living.

The writer, on entering the service and posted to one of the most expensive stations in India, was able, as a bachelor, to secure from his lieutenant's pay Rs 100 (about £7 10s. 0d.) per month, and this without the least effort to economise.

For a married man, the expenses are naturally far heavier, and life would be difficult in most stations under Rs 1,000 per month. This figure is reached after six years' service. It should, however, be noted that the introduction of four free passages home in the course of service has eased the married man's finances very considerably.

A word as to the lighter side of Indian life. Visitors to Bath, Bognor and Tunbridge Wells are apt to regard the European population of India as a savage and irascible breed, and whilst in later life there may be some justification for this view point, the newcomer will find himself welcomed and at once made free of a larger circle than he very probably enjoyed at home.

Since Western amusements such as theatres and night clubs are necessarily lacking, private entertaining and club life play a much bigger rôle than at home.

Dinner parties, tennis teas, moonlight picnics, etc., follow one another with bewildering rapidity and the most hardened misanthrope is eventually dragged from his shell and made to pull his weight in the station team.

The Gymkhana (Club) which exists in every station serves as the pivot around which social life revolves. Everyone joins as a matter of course, and here are facilities for most sorts of games, all at very moderate rates.

The writer recalls one Club where, for a subscription of 27/- a month, it was possible to hunt, play polo, cricket, golf, tennis, squash racquets, attend dances twice weekly, and enjoy the use of palatial club premises and an extensive library.

To the man keen on games, few careers could be more attractive. Work ceases as a rule at one o'clock—for we begin early—and the rest of the day is free for recreation.

Some stations are renowned for *shikar* (shooting), in fact, one's amusements, according to locality, range from yacht racing to winter sports.

To sum up, therefore, one would recommend the Indian Medical Service to those who feel that a secure income and pension with the consequent absence of major financial worries coupled with a life in which sport and travel occupy a large part, is preferable to the routine of practice in this country.

To such it can be heartily commended; to those who aspire to riches, to the much-married, or the adventurous it will not appeal.

G. H. F. G.

Reviews

Clinical Methods By Robert Hutchison, M.D., F.R.C.P., and Donald Hunter, M.D., F.R.C.P. 9th Edition. Published by Messrs. Cassell & Co. *Price* 12*s*. 6*d*.

THE 9th edition of *Clinical Methods*, associated for many years with the name of the late Dr. Rainy, has been brought out by Dr. Hutchison, who with Dr. Rainy was responsible for the production of former editions, and Dr. Donald Hunter.

This manual, which is one of the few dealing with the subject of clinical methods within the range of the normal purse, has now been thoroughly revised and brought up-to-date. Such additions as were necessary have been made at the expense of much that had become relatively superfluous, so that the book retains its former convenient dimensions. The chapter on pathological fluids has been extended by a full account of the cerebro-spinal fluid and the diagnostic value of its composition. In the chapter on the Nervous System useful diagrams of the cervico-brachial and lumbo-sacral plexuses have been added, and the section dealing with Strabismus and Diplopia have been brought thoroughly up-to-date and are embellished with many explanatory diagrams; further the clinical signs in relation to tetanus have been elaborated and illustrated. Dr. G. T. Western has thoroughly revised the chapter on bacteriological investigations, and a noteworthy addition is the section dealing with the important agglutination reactions. Lastly, the Circulatory System now contains an account of some of the X-ray work in this connection.

To make room for these extensions certain curtailments have been made with regard to some of the less used apparatus. For instance, Oliver's hæmaglobinometer has but a passing reference, and the description of Mr. Hardy's perimeter has been omitted altogether. In effect, those sections which have in this edition been excluded are more than compensated for by the valuable additions made with a view to modern investigatory methods.

Clinical Atlas of Blood Diseases. By A. Piney, M.D., M.R.C.P., and Stanley Wyard, M.D., M.R.C.P. Published by Messrs. J. & A. Churchill. *Price* 12*s*. 6*d*.

THOUGH there are numerous excellent treatises on hæmatology, both large and small, we welcome this little book as being just the ideal work on the subject, both for the busy practitioner and the groping student.

As an atlas portraying the various cells met with in performing blood examinations it is excellent; but the explanatory synopsis, especially on the commoner diseases of the blood, in which the definition, ætiology, signs and symptoms, pathology, differential diagnosis, prognosis and treatment of these diseases are given, makes the book a positive gem.

The greatness of the work lies in its compactness and in the ease with which the blood picture of any of the so-called blood diseases may be turned to for reference.

A tabulation of the causes of splenomegaly is given towards the end of the book; this should prove of great value to many practitioners.

A page or two towards the end of the book might have been relegated to the technique of the commoner methods of staining blood films; for, simple as are these methods, it is a great convenience to have them at one's finger tips in times of need.

We can heartily recommend this book, and we consider that it should be in the library of every medical man, who, every now and then, is forced to rely for his final diagnosis on that valuable aid—the blood picture.

Habitual Constipation. By M. H. Burnier, M.D. Lausanne, M.R.C.S. (Eng.), L.R.C.P. (Lond.). Translated by Hubert Child, M.R.C.S. Published by Messrs. Baillière, Tindall & Cox. *Price* 3*s.* 6*d.*

THIS little book, which belongs to the Minor Monograph Series, seems to have been written as an awful warning, and so vivid is the author's description of the vicious circles attendant upon constipation and so awful appears to be the patient's plight, that one wonders how on earth any treatment is to do him the slightest bit of good. The social demands of civilisation provide the first insult to the alimentary tract, but these it forgives, and adapts the "rectal call" accordingly. From the patient's disregard for this summons arise all the other complications, such as dyschezia, loss of "rectal sense," overloading of the descending colon and its accompanying muco-membranous entero-colitis, reversed peristalsis, "right-sided" constipation, and finally gastro-intestinal stasis and auto-intoxication. Evacuant remedies of enemata and suppositories only aggravate the condition, converting constipation, *i.e.*, a diminution in the number of physiological motions, into diarrhœa, or a large number of unphysiological motions. With regard to treatment, the author advocates the use of an instrument of his own design, the "laxor," by which he dilates and massages the rectal pouch, and relieves the spasm of the anal sphincter.

So imbued with the necessity of brevity is he, that his obsession rather confuses his sense of time in the last chapter, in which he alternates bewilderingly between the past and present tense.

Theoretically, the views are very sound, and for this reason the book may be recommended, for his account of the physiology of defæcation is clear and well-written, but practically the principles of treatment are, in the majority of cases, untenable. The author has evidently never had to treat constipation in a panel or hospital out-patient practice.

Elementary Anatomy and Physiology for Nurses. By P. M. Lodge. Messrs. J. & A. Churchill.

TO the majority of nurses in training this text-book appears to be too elementary to be illuminating. The author explains that the matter is that given in a Preliminary Training School, and as such it is adequate and satisfactory. But most nurses require an interesting text-book with diagrams and more detail for reference to supplement the elementary lectures they attend on the subject. Also it is advisable to introduce students from the beginning to ordinary anatomical terms, instead of using such expressions as the following :—"This peg sticks up into the extra hole of the atlas." "Above the foramen is a bump," etc., etc. It is doubtful too whether, in arranging such an elementary treatise on the subjects, it is wise to separate anatomy and physiology so absolutely. A good deal of needless repetition seems inevitable.

Sport

Rugby

Guy's v. Bristol

ON Saturday, March 1st, Guy's visited Bristol and suffered a heavy defeat by four goals, a penalty goal and four tries (35 points) to a dropped goal and a try (7 points).

Following their strenuous cup-tie, Guy's were compelled to make several changes in the side which represented them against King's.

On the other hand, Bristol fielded a powerful side, led by the English captain, Sam Tucker, and were practically at full strength.

Although there was such a wide margin of points between the two sides, the game was much closer than the score indicates.

During the first half, Guy's put up a fine fight and at the interval were unfortunate to be eight points behind, but in the second half, Bristol gradually gained the upper hand and their backs made full use of any opportunities that came their way, and scored whenever the least chance presented itself.

From the kick-off, Bristol rushed the ball to Guy's goal-line, and one or two of their forwards nearly got over, but Robinson managed to touch down. Guy's then recovered and for a time harassed the Bristol defence, with some excellent passing between the threes.

However, the Bristol pack drove Guy's back to their '25, where the hospital conceded a penalty for Hazell to kick an easy goal.

A little later Collins gained possession from a scrum, and darting round the blind side, gave Lillicrap a fine chance, which the winger accepted. With a fine run, he swerved, passed Hale-Munro, crossed in the corner and eventually touched down behind the posts for Collins to convert.

This reverse seemed to inspire the Guy's team, as they improved considerably and came near to

scoring on two or three occasions. For some minutes they more than held their own and after a brilliant round of passing, Atkins got possession on the left and slipped through the defence to score a well deserved try in the corner, which was not converted.

After Hazell had narrowly missed a penalty goal for Bristol, and following a fine dribble by S. and F. Tucker, Guy's had to defend their line until the ball went dead.

This attack was never cleared and from some loose play in Guy's '25, Collins gave a good pass to Sherman who crossed in the corner.

The second half was all in favour of Bristol in spite of the fact that Dr. Pridie, one of their forwards who was injured, was unable to resume after the interval.

After five minutes, the home side went further ahead. From a quick break up of a scrum, Broome got possession, and cutting his way to within ten yards of the line, threw out a long pass to Lillicrap who took the ball in his stride, stumbled, but recovered his balance and crossed in the corner.

A little later, as the result of a fine burst through the centre by Babington, Moncrieff handed to Lillicrap who again got over.

Further tries were added by Broome (2) Sherman, Babington and Lillicrap, three of which were converted by Hazell.

Just before the end Atkins dropped a fine goal for Guy's, but by then the Hospital were well beaten.

Team—T. A. Hale-Munro ; A. G. Johnson, W. Lewis, H. J. B. Atkins and T. G. Robinson ; J. E. Gieson and R. J. Eustace ; R. A. P. Hogbin, G. F. Lashmore, J. Kunovsky, L. I. S. Campbell, L. B. Hilton, J. P. O'Shea, P. K. Robinson and L. B. S. Woodiwis.

Hospital Information, etc.

Notice

ANNUAL General Meeting of Students' Club will take place Friday, April 4th, at 4.30 p.m., in the Medical School.

1. Election of Students for Committee.

2. Election of Members for Catering Sub-Committee. The latter act as Student Directors of the G.H.C.C.C.

D.W.C.N.,
Hon. Sec.

Papers by Guy's Men

R. Brooke, M.S., F.R.C.S. Symmetrical gangrene complicating rheumatoid arthritis. *Brit. Med. Jour.*, 1930, i, 493.

R. Creasy, M.R.C.S., L.R.C.P. Static treatment of enlarged prostate. *Brit. Med. Jour.*, 1930, i, 494.

J. A. Glover, O.B.E., M.R.C.P. Milroy Lectures on the incidence of rheumatic diseases, Lecture I. *Lancet*, 1930, i, 499.

G. B. Pritchard, L.D.S. Bony deposits on teeth. *Brit. Dent. Jour.*, 1930, li, 269.

A. H. Todd, M.S., F.R.C.S. Painful heels. *Pract.*, 1930, cxxiv, 308.

L. J. Witts, M.D.. M.R.C.P. Achlorhydria and anæmia. *Pract.*, 1930, cxxiv, 348.

Change of Address

C. F. Brockington, M.D., D.P.H., Sheltwood Farm, Tardbigge, Bromsgrove, Worcestershire.

Dr. W. F. Hannay, 3, Carlyle Square, Chelsea, S.W.3. Flaxman 5375.

Appointments

C. F. Brockington, M.D., D.P.H., to be Assistant Medical Officer of Health for Worcestershire.

J. M. H. Campbell, M.D., F.R.C.P., Physician to Out-patients, National Hospital for Diseases of the Heart, Westmoreland Street, W.

Surg.-Lieut. D. C. Drake to *Godetia*.

Flight-Lieut. J. B. Gregor to Station Headquarters, Upper Heyford.

C. E. Iredell, M.D., M.R.C.P., Physician in charge of Electro-therapeutic Dept., Freemason's Hospital and Nursing Home, Fulham Road, S.W.

Births

PAYNE.—On February 9th, 1930, to Winifred, wife of W. W. Payne, M.B.—a son.

WILLIAMS.—On March 2nd, to Gladys (née Bennett), the wife of H. Keith Williams, M.C., M.B., B.S., Attwood House, Basingstoke—a son.

EDS. {J. B. B. / P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *5th April* 1930 — *Number* 1088

PASSIM

A Contemporary, after the game with St. Bartholomew's, wrote "A Hospitals' Cup Final was played this afternoon at Richmond without a rag,. . . . ." From the first we have always had our doubts as to what useful or pleasurable purpose the ragging served on these occasions, and it was with considerable relief that we noticed the absence of the less edifying moments in this year's demonstration. The same contemporary continues," . . . . Without the usual fight with eggs, flour, decayed fruit and soot, Guy's and Bart.'s met, and enthusiastic supporters were merely exuberant." While the above details of previous rags is considerably exaggerated, we have already admitted the doubtful taste of past occasions, and confess that we found the exuberance of a fortnight ago infinitely more amusing to watch ; the only damage done was wrecked on one of the goal cross-bars, and this was so neatly and quickly spliced in Guy's colours that no harm was done; our finer feelings suffered not at all.

The absence of grotesque dress, unsightly without being comic, was a further advance in what seems the right direction. The plea that such garb is necessary for the London Bridge collection of the morning was finally repudiated, when the handsome total, this year added to the Hospital's coffers, became known. The collectors are to be most heartily congratulated on the £900 8s. 8d. that, by gentle persuasion, where necessary, rewarded their morning's labours..

▭

By the death of Dr. John Dixon on March 31st, at the great age of 97, Guy's loses its oldest Old Guy's Man, the Royal College of Physicians its oldest Licentiate and the Royal College of Surgeons its oldest Member. Dr. Dixon, moreover, was the oldest Freemason in the world. He came to Guy's 79 years ago, and for the last 70 years of his life has lived in Bermondsey, where he held the post of Medical Officer of Health for 25 years.

Despite his great age, he took a remarkably keen interest in all that was going on around him, and delighted in dining out. Unlike most very old people, he did not attribute his longevity to any peculiar restrictions of diet or régime, and was proud of the fact that he could still enjoy his eight cigars a day. To the end he delighted to call himself a Guy's man, and was one of the most distinguished of those present at the last Guy's Biennial Dinner. On the day of his death the flag on the Bermondsey Town Hall was flown at half-mast.

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For the past two months or more we have noticed in the preparation rooms to Theatres II and III new wash-basin fittings of quite the latest pattern, with taps worked by the feet. As yet, they remain unfitted, however, and lately we have begun to wonder if this be mere ordinary procrastination or whether this delay augurs other more revolutionary changes in our "1890" theatre arrangements, which are to come about at the same time ; we wonder.

▭

We would draw attention to a letter from Major Ian Hay Beith, published in this number, in which he appeals for support for the proposed memorial to the late Sir Alfred Fripp ; we hope that in their turn, readers will bring this scheme to the notice of their non-medical friends. In whatever way the Governors of this Hospital finally decide to apply this fund, it is a fitting opportunity to keep alive the memory of our late Senior Surgeon.

Obituary

JOHN MAGNUS REDDING, F.R.C.S.Eng.

ON March 17th, 1930, Guy's Hospital had the great misfortune to lose by early death the services of the Surgical Radiologist to the Hospital.

Born on May 19th, 1889, at Ramsey, Huntingdon, Redding was educated at Beaumont College, Old Windsor, between 1903 and 1907. In 1907 he entered Charing Cross Hospital as a student, qualifying in 1912. In 1914 he obtained the F.R.C.S. Eng. During the latter half of 1914 and the beginning of 1915, he was Registrar at the Chelsea Hospital for Women.

At this time it became increasingly obvious that the War was going to be the reverse of short and he joined the R.A.M.C. as a Temporary Lieutenant, becoming Captain a year later.

Immediately on joining up he proceeded to France, being for a short time stationed at Calais. As was typical of the man he was not satisfied with remaining at the Base and was, by his own request, sent up the line. There he remained until October, 1917, when he was taken gravely ill and was operated on for a perforated duodenal ulcer in a Casualty Clearing Station. Recovering from this he was invalided home and after a period of leave was sent to Aldershot where I first met him early in 1918.

We were both attached at that time to the Cambridge Hospital. I got to know him well before I returned to France and was more than pleased on my arrival at Guy's, in 1919, to find that he also was now a member of the Staff.

Throughout the ten years following I grew to know and like him better and better. He had recovered from the immediate effects of his severe illness of 1917 sufficiently well to take up the practice of radiology in civil life, but it was not long before further trouble became manifest.

During the ensuing years he was rarely free from pain, and only those who knew him best realised under what physical disabilities he was labouring.

The three characteristics in Redding which impressed me most after a long friendship, were straightness, bravery, and a very keen sense of humour. No man can desire more in a friend or a colleague. The fortitude with which he supported his almost constant pain was tremendous, and very few men could have continued to show the interest and skill in their work which he always displayed under his handicap.

Our greatest sympathy goes out to his wife and all those of his family to whom he must have meant so much.

E. A. S.

A short personal appreciation from one who knew Mr. Reading well for some years :—

OF my post war impressions and readjustments, nothing has been more pleasant than *getting to know Jack Redding.*

It is only now that one realises what he meant: *my earliest judgment* was based on his evident keenness to learn his job, his desire for criticism and appreciation of being informed of operative findings, whether they confirmed his own opinion or no.

Then we drifted into friendship—the loss of which makes one reflect how rare are the real friendships of middle life. Under his rather quiet, shy exterior there was a love of gardens, of country walks; an appreciation of drawings and a real sense of humour.

One got to realise that he was never fit, never felt really robust, was often in pain—of which it is probable few knew the presence. Healthy people would wonder that almost constant pain could be concealed under such cheerfulness.

Lately at times his courage and control were overcome dnd he ceased to fight and to hope, but for the most part he boldly looked misfortune in the face. Consideration for the needs of others seemed his only concern—as with a smiling courtesy he bore his daily pain.

I should not close without an appreciation of his work—he brought a keen clinical insight to special knowledge in a way so helpful to the surgeon that his place will be hard to fill.

C. H. F.

Myxœdema and other Manifestations of Thyroid Deficiency

A Clinical Lecture by Dr. J. A. Ryle

GENTLEMEN.—In the case of the patient whom you see before you I propose to reverse the usual order of procedure and, before considering her history and her symptoms, to ask your attention to certain physical features, and particularly to her facial appearance. Physiognomical diagnosis is an important chapter in clinical medicine and becomes steadily more so as we turn the pages of experience. There are few cases in which the face will tell us nothing. There are some in which it tells us almost everything we need to know. In acromegaly, myxœdema, Graves' disease, in some cases of tabes, in the Parkinsonian mask of paralysis agitans and encephalitis lethargica, in pernicious anæmia, in the Hippocratic facies of grave abdominal disease, and in the mitral facies, we have well-known examples of " diagnostic physiognomies," and the list might be considerably extended. Not infrequently the countenance of disease will guide us to a correct opinion when the physical overhaul or the tale of symptoms is unconvincing. In examining facial characters we take into account the general conformation and proportions, the colouring and nutrition, the texture of the skin, the expression, and the distribution of the hair, any or all of which may show some significant change.

You will doubtless be chiefly impressed by the anæmic appearance of the patient who confronts you, but I would also ask you to note how broad her features are, how placid and immobile and lacking in any play of emotion. Although there is a marked underlying pallor, with a slightly yellow tint, the cheeks are peculiarly pink. The skin is smooth, like china. The eyebrows are scanty and the hair-margin has so far receded towards the vertex that she has found it necessary to arrange her coiffure in such a way as to hide this deficiency. When I try to pluck up the skin of the forehead I find it almost impossible to do so on account of the thickness of the skin, and on taking the tissues of her cheeks between a finger and thumb a feeling as of some firm infiltration is obtained.

These are the facial characters of myxœdema, and, although in her case there are some additional findings, including a large spleen, which have suggested the possibility of a mixed pathology, they justify, when taken in conjunction with her own complaints, a fairly confident diagnosis of this disease.

Our patient is aged 42 and married. She has had five children and two miscarriages. Her family history and previous personal history are unimportant. Fifteen months ago she noticed she was getting pale, and since then she has experienced an increasing loss of energy and dyspnœa on exertion. Her hair has been getting thinner. She does not sweat as readily as she used to do. She prefers the warm weather. Her weight has not altered appreciably. In the ward we have been struck by her slow speech and her impassive behaviour. Her voice is husky at times. She has a broad and rather smooth tongue and on account of this smoothness and her anæmia and the enlargement of the spleen the possibility of pernicious anæmia had been discussed. However, her blood-count shows a secondary anæmia, with hæmoglobin 25% and a colour-index of 0.3. She does not show the slowing of the pulse and markedly subnormal temperature which are frequently manifest in myxœdema. I am indebted to Mr. J. K. Marshall for the notes of her case.

Before passing to a more general discussion of the disease and its differential diagnosis and treatment, I should like you to examine these water-colour portraits of two other patients, previously under my care, and to listen to their histories. In these cases the diagnosis was further confirmed by their response to treatment, a confirmation which we have still to obtain in the case before us.

Case 1.—Mrs. N., aged 42, was admitted to Esther Ward on February 3rd, 1923. My notes read as follows : her mother died of consumption. She had two daughters living, aged 21 and 19 years. Two other children died in infancy. Twenty-two years ago she had enteric fever. Before this date she enjoyed perfectly good health, but she has never felt really fit since the illness. In 1911 she had pneumonia, and six months later was operated on for appendicular abscess. These two illnesses further aggravated her feelings of unfitness. For twelve years she has noticed gradually increasing muscular weakness, with impairment of memory and slowness of speech. She has also experienced an increasing intolerance for cold, and feels chilly even in summer. In recent years she has been growing fat, though latterly she has again lost weight. She has noticed puffiness of the face and eyelids and dryness of the skin. She never sweats. Recently she has had to give up her household duties on account of weakness. She frequently

forgets what she wants to say, and states that whereas she used to be "sharp-spoken" she is now "very slow." Her hair has been falling. The periods have been irregular. She was sent to Guy's, however, not so much for these general symptoms as for some vague abdominal discomforts, for which she was first seen by Mr. Turner at Out-Patients. Mr. Turner considered that these symptoms could be sufficiently accounted for by visceroptosis, and was struck by her general condition. He drew attention to the hyperæmic patches on her cheeks, which are well shown in the picture and which suggested a diagnosis of mitral stenosis. Indeed these were a most striking feature contrasting sharply with her rather yellowish underlying pallor. Even more striking, however, was the general heaviness of the features, and the complete absence of any play of emotion or expression in the course of the interrogation. The eyelids were slightly puffy. The hair was dry and coarse, and the outer half of the eyebrows was lacking; the hair-margin had considerably receded. Her voice was monotonous, and her words were uttered slowly. Her latent period in answering questions was longer than usually obtains in a woman of average intelligence. The integument of the forehead was thick. The skin was everywhere dry, and the axillary hair was scanty. Her pulse on admission was 64; temperature 97.4; and respiration-rate 20. The systolic blood-pressure was 135 mm. of mercury. The blood showed a hæmoglobin percentage of 65, and a red cell count of 4,140,000. The basal metabolic rate was minus 24.7 per cent. Glucose tolerance was, however, normal. It should be mentioned that she had been taking small doses of thyroid while awaiting admission to hospital. She was treated with thyroid in the form of Tab. Thyroid (B. & W.), and seemed to do best on a dose of two grains three times a day. This represents only about a grain and a half of dried thyroid in the day. She improved steadily, and a few months later, excepting for a slight tendency to dizziness, had lost all her former symptoms. Her colour had improved remarkably. In figure she became slim and sprightly. Her face and expression were happy and vivacious.

Case 2.—Mr. M., aged about 50, was admitted to Stephen on April 30th, 1923. He complained of "debility and noises in the head." He stated that in the year 1911, he became gradually weak in his legs and arms, and that after the slightest exertion he felt exhausted and tired. In 1919, he felt much worse and was admitted to St. Bartholomew's Hospital. He says that he was treated there for "septic anæmia and liver trouble" for which his teeth were extracted. He has, however, remained incapable of any sustained effort; has felt the cold severely; his bowels have been constipated; and he has continually felt weak and tired. Latterly his memory has been defective.

To look at he was very different from the patient just described, and yet his appearance at once suggested myxœdema. As you will see from the picture he was not fat and did not show the patch of malar hyperæmia; nevertheless, his face was expressionless; his forehead was corrugated and stiff, but smooth and shiny between the wrinkles; his hair was sparse and felt curiously dry and coarse when rolled between the fingers, and was altogether lacking in gloss. The skin of his face had a yellowish tinge; on the trunk it was scaly and dry; sweating was entirely absent; the wrinkled skin of his neck was reminiscent of the tortoise; his speech and movements were laborious and slow. The first time we examined him at the bedside, Sister Stephen said "Would you like to see him take his own shirt off?" She had recognised that this leisurely act was a demonstration in itself. His hæmoglobin was 78%. His red cells were recorded as 3,740,000. His basal metabolic rate was nearly 50% below normal. Before treatment his daily metabolism amounted to only 805 calories. A month later, after treatment with Tab. Thyroid (B. & W.) rising to grains 8 per day, his daily metabolism amounted to 1,480 calories—still a low figure.

ÆTIOLOGY AND GENERAL FEATURES.

Myxœdema is a disease of adults and occurs for the most part in women shortly before, during, or after the menopause. Seven women are affected for every one man. One half of the cases occur between the ages of thirty and fifty. No definite predisposing factors are known, but sometimes, as in the second of these cases, the symptoms seem to have developed insidiously after a severe illness.

The symptoms are those which one would expect from a general depression of metabolism, but we may go further and say that there is no vital function which may not share in the depression. Weight is frequently, but not always, increased; fatty pads may develop above the clavicles; the pulse is slow; the temperature is subnormal; the patients nearly always complain that they feel the cold very much; the skin is dry; the hair coarse and scanty; the eyebrows are commonly deficient in their outer half; the nails are brittle; and the bowels are costive. Movements and speech are slow and lack expression. The voice may be husky and in advanced cases dwindles to a croak, owing to submucous infiltration of the vocal cords. The facies often betray the diagnosis directly the patient enters the room, and having seen a case or two one is little likely to miss others thereafter. No

emotion seems to light up the features during conversation, and a smile, if it appears, is slow to develop. The skin of the face, contradictory though it may seem, is both abnormally smooth and abnormally wrinkled. The smoothness, as depicted by Gull, resembles porcelain, but around the eyes and mouth are frequently to be seen numerous fine wrinkles. The eyelids are thick and puffy and look œdematous, or as though they had recently been œdematous. Nephritis may suggest itself at the first glance, or a suspicion of mitral disease may be entertained on account of the peculiar patch of purplish-pink hyperæmia displayed upon the cheeks—" the cheeks tinted of a delicate rose-purple " in the words of Gull. The hands are coarse and sometimes referred to as spade-like. The legs may appear infiltrated, but, unless the disease is complicated by renal inefficiency or severe anæmia, there is no pitting on pressure. The urine contains no albumen. There may be a slight or sometimes a severe anæmia of the secondary type, a feature which is not always sufficiently stressed, and which at one time led to the suggestion that the thyroid gland might be a hæmopoietic organ. The psychology of these cases no less than their physique is affected. In the earlier stages the patient will herself notice her langour and disinclination for mental effort and concentration. Later this becomes obvious to all, and she is heavy and unresponsive, and her speech is slow and toneless. The memory becomes poor. Nothing is more remarkable in the general improvement under treatment than the return of vivacity, the altered timbre in the voice, and the recovery of mental alertness and elasticity. Amenorrhœa is often present in cases developing prior to the menopause, although sometimes there is irregular or excessive loss. Menstruation may re-appear under treatment in the former case, and it is stated that, after a period of sterility, fertility has been re-established. The symptoms which have been described also result from extirpation of the thyroid, and upon this evidence, as well as the clinical and therapeutic study of cretinism and myxœdema, our knowledge of the part played by the thyroid gland in controlling metabolism is largely based. In recent years determination of the degree of hypothyroidism has become possible by means of estimations of what is termed " the basal metabolic rate." The basal metabolic rate expresses the calorie-output of the individual in as complete a state of rest as possible, that is to say at rest in bed in the morning after a twelve-hour fast. The variations from the normal are expressed as percentages above or below the ascertained figure for a healthy individual of the same sex and size as the patient under investigation. They are based on determinations of the patient's oxygen consumption. In untreated myxœdema we expect the basal metabolic rate to be below normal. In Graves' Disease in its active phases it is above normal. As a matter of practical utility an adequate estimate of the degree of hypothyroidism and of improvement under treatment may be obtained by observations of the general symptoms, the pulse-rate, respiration-rate, temperature curve, and weight.

DIFFERENTIAL DIAGNOSIS.

In a fully developed case you will agree that the diagnosis of myxœdema should not be difficult, and yet there are four conditions for which it may be and not infrequently is mistaken.

The first of these is *mitral stenosis or other heart disease* on account of the purplish malar hyperæmia. A year or two ago a patient aged 69 came to see me, looking so ill and sallow and with such a purple hue to her cheeks, that I could well understand why she had been kept in bed for some weeks as a case of heart disease. Her complaint of great weakness and some dyspnœa lent additional weight to the opinion. However, I could find no sign whatsoever of cardio-vascular disease, and she showed many other stigmata of myxœdema. She was restored to active health by thyroid treatment.

The second is *pernicious anœmia,* and here confusion occurs for two main reasons, firstly because myxœdematous patients may show a " yellowy " anæmia not unlike the lemon tint of the other disease; secondly, because patients with pernicious anæmia not uncommonly present a very smooth skin and other facial features a little suggestive of thyroid deficiency. Perhaps the activity of the thyroid gland is actually subnormal in virtue of the anæmia.

The third is *nephritis* because of the pallor and puffiness, but the absence, as a rule, of true œdema and albuminuria makes the distinction.

The fourth example of mistaken identity which I have encountered is *neurasthenia,* an old enemy to precision in diagnosis. One of the worst cases of myxœdema in a male which has come my way was that of a man in middle life, who, for upwards of ten years, had slowly been losing mental and physical energy until he was almost incapacitated for work. He had been given the label of neurasthenia. His harsh, dry skin, his weary voice and slow speech, his thick winter underclothing worn in midsummer allowed the correct label to be attached and the proper treatment to be put in train. His case reminds me of a particular difficulty in diagnosing myxœdema, namely, its slow course and insidious advance. Three of the cases I have described gave histories of ten years or more. It is thus easier, sometimes, for the consultant or

someone who has never seen the patient previously, to form his opinion than for the family doctor who must endeavour to assess the meaning of subjective symptoms often indefinitely stated by the patient, and remains unimpressed by physical or physiognomical changes by reason of the very slowness of their arrival during a period, not of weeks or months, but years.

TREATMENT.

I need not say much about treatment, for, apart from general hygienic measures, it may be condensed into the one word "thyroid." The dosage varies with the case, but large doses are rarely necessary. The response to treatment becomes apparent within about three weeks. It is well to remember that most of the proprietary preparations have their dosage expressed in terms of fresh gland, and that five grains of Tab. Thyroid (B.& W.), for instance, is therefore equivalent to one grain of thyroid siccum (B. P.). I seldom find that more than three grains daily (or its equivalent) of thyroid siccum are necessary to control a fully developed case. Occasional adjustments of the dosage may be necessary, but the administration must be continued for the rest of the patient's life.

SOME OTHER MANIFESTATIONS OF THYROID DEFICIENCY.

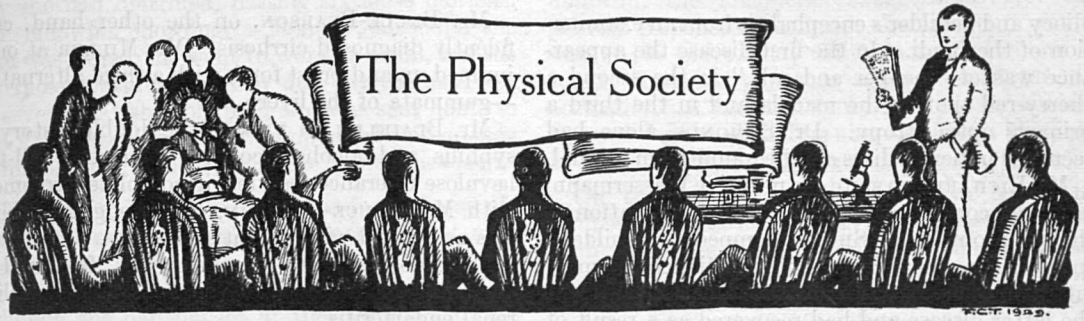
(1) *Minor Hypothroidism.* For every case of developed myxœdema which you may see, and as such it is a rare disease, you will see many cases of minor hypothyroidism. In women of a particular type it is not uncommon for dryness of the skin, brittleness of the nails, falling of the hair, and a gain in weight to accompany or follow the menopause, and small doses of thyroid may here have a beneficial effect. Obesity, without other signs of hypothyroidism, is not generally an indication for thyroid treatment.

(2) *Creaky Knees.*—Some years ago, Mr. Slesinger drew my attention to a type of arthritis affecting the knees only in women at or after the menopause. I have been accustomed to label the condition "creaky knees." At times it causes considerable disability with stiffness, weakness, pain, and not a little thickening of the joints. The patients are particularly aware of their disability in going down stairs or getting up out of a low chair. They generally show some slight evidences of hypothyroidism and are often, but not always, overweight. Mr. Slesinger told me that they frequently improved in a striking way under thyroid treatment and I have many times confirmed the observation. The improvement in local symptoms and signs is remarkable and this simple measure may succeed when others have been tried and failed. I do not think the effect can be wholly accounted for by lessened articular stress through loss of weight.

(3). *Sterility.*—I was once consulted by a married woman in the thirties for general unfitness and dyspepsia. She also confessed that for years she had been hoping in vain for a baby. She had an exceedingly dry skin. Her health improved with thyroid and she later reported that her wish had at last been fulfilled. On one other occasion I have recorded pregnancy following thyroid treatment for hypothyroidism. I think it not improbable that the thyroid was responsible, but you must not expect thyroid to bring about this happy result unless there are other indications of defective thyroid secretion.

(4) *Chronic Œdema.* The last case which I shall describe to you is that of a spinster aged 66 who consulted me on account of extremely thickened, stiff, and creaky knees. In addition both her legs were enormously swollen with a true, but very solid œdema, so that their appearance suggested elephantiasis. To this condition she had become resigned as she had had it for many years; in fact, before seeing me she had consulted Guy's physicians of two previous generations about it. Mentally she was very active and alert, and although very stout, she did not show other signs of hypothyroidism. I prescribed thyroid because of the creaky knees and to her great pleasure, and my surprise, a most remarkable improvement followed not only in respect of the knees, but also in respect of the œdema, which gradually melted away. She lost three stone in weight and the circumference of her ankles was reduced from $13\frac{1}{2}$ to $9\frac{1}{2}$ inches. This was one of those happy and unexpected results we meet with from time to time, but it followed upon a treatment not without a rational basis.

In conclusion I would remind you of some historical points concerning myxœdema. It was first described by a Guy's physician, for in 1873, Sir William Gull read a paper before the Clinical Society of London "On a Cretinoid State supervening in Adult Life in Women." In this he depicted all the essential characters of the disease, and no one has since improved upon his clinical portraiture. The morbid anatomy and histology of the disease were described four years later by William Ord, who refers to the "jelly-like swelling of the connective tissue, chiefly, if not entirely, consisting in an overgrowth of the mucus-yielding cement"; he also proposed the name of myxœdema. Hilton Fagge, in a paper on "Sporadic Cretinism" (1871), had already associated the physical changes with atrophy of the thyroid gland. In 1892, Hector Mackenzie showed thyroid feeding had the effect of curing the disease.



A CLINICAL and Pathological Meeting was held on Thursday, 20th March, with Mr. R. GLANVILL in the Chair. He had collected some interesting cases, but the attendance was poor.

Mr. FERGUSON had no patient to show, but related the clinical history of a man who had noticed for a short while a swelling in the neck, had coughed up streaks of blood and later developed epileptiform convulsions and slight weakness of the left side of the body. Mr. SIMPSON then completed the story. At autopsy the lungs showed not only a mass of new growth, but a septic bronchopneumonia with abscess formation, and there were metastases of growth in the suprarenals and brain.

Mr. W. D. G. JONES, fresh from holidays, still remembered the approved opening to the discussion—"What was the man's blood-pressure? What about the blood count? Why was not Addison's disease suspected?" Mr. FERGUSON supplied the information and apparently there was no reason to suspect any such disease.

Mr. MCCLEAN briefly referred to theories of causation of pulmonary growths, which led Mr. COHEN to add to the list of irritants, petrol fumes, tar, etc., a new one—cider.

Mr. HOLLIS, true to type like his fellow clinical Mr. FERGUSON, had lost his patient a few days previously. For the last two months of his lifetime, to give his story however, he had complained of generalised "rheumatism." On admission he had a cough and a pericardial rub, and he was subject to night sweats. X-ray showed a tumour in the posterior mediastinum, while paracentesis of his chest produced clear fluid, which at post-mortem, so Mr. SIMPSON said, was found in even greater quantity in the abdomen. The mediastinal tumour proved to be a mass of glands matted together, while the pericardial sac was obliterated by what appeared to be nodules of growth, which were also found scattered about the peritoneum. There were three grey nodules in the spleen and three ulcers in the lower œsophagus, and the liver was studded with umbilicated "growths." The microscope disclosed the tell-tale giant cell of tuberculosis, much to everyone's surprise.

Mr. NORTH invited discussion about a most interesting patient of Dr. Hurst's. In 1927 he had been found to be suffering from a gastric ulcer of the lesser curvature of the stomach about its middle; a posterior gastro-jejunostomy was done. A test meal had shown a low acid curve before operation. Six months later, he commenced to have diarrhœa, followed by tinglings and weakness in the legs. He had been re-admitted this year with marked anæmia and a complexion of pale lemon colour. A test meal showed complete absence of free acid, but a normal curve for the total chlorides; the blood count gave 1,920,000 red cells per c.mm. with a colour index of 1.22. In point of fact he had developed Addison's anæmia.

Mr. GLANVILL in answer to Mr. SHONE, said that two X-rays of the stomach had been taken; the first, a heavy meal taken at one drink, had passed straight through the gastro-jejunal stoma, but the second X-ray taken more gently had demonstrated a patent pylorus. It was proposed, we learnt, in the unlikely event of the patient acquiescing, simply to close the gastro-jejunostomy to obtain a cure.

In answer to Mr. COHEN, Dr. HAMPSON stated that in pernicious anæmia, the blood chlorides were normal.

Mr. CHAMBERLAIN had shown a small girl of six years old, the youngest of three; he now gave us her history. She had developed normally until July of last year when she was knocked down by a bus; she completely recovered from her head injuries, but in September had begun to return to a more babyish state of mind, and was unable to walk. She had steadily deteriorated mentally until the time of admission, when the principal physical sign was a bilateral Babinski.

Mr. CROOT, perfectly at home with such names, briefly considered the differential diagnosis of juvenile Tay-Sach's disease, amaurotic familial

idiocy and Schilder's encephalitis from an examination of the fundi. In the first disease the appearance was of "pepper and salt," in the second a cherry-red spot at the macula and in the third a primary optic atropy. Dr. SYMONDS alone had seen this patient's discs and he found them normal.

Mr. RICHARDS, in spite of a negative Wassermann, favoured congenital syphilis as the explanation of the symptoms. Mr. SHONE plumped for Schilder's encephalitis. Dr. HAMPSON mentioned a most interesting child who had been almost dead from the latter disease and had recovered as a result of attention to her calcium metabolism, furthermore, the primary optic atrophy, that she had previously shown, had disappeared.

Mr. MEDLEYCOTT showed a boy which some of us have seen in our "student days," a boy with a high degree of myopia and bilateral coloboma, saddle-nose and Hutchinsonian teeth, also a congenital heart. A certain amount of discussion waged around the nature of the last abnormality; generally it was thought to be a patent ductus arteriosus. Mr. SHONE ventured to group all the abnormalities as one clinical entity, but could not recall a name by which to call it. Dr. HAMPSON suggested he was thinking of arachnodactyly, but further told us this was not such a case.

Mr. HOLDEN showed an interesting case, a man of 40 who seven years ago had had purpura, and who now had swelling and "blotching" of the ankles, also sudden pains in the chest, persistent cough and night sweats. On examination he had an enlarged, firm liver, and a tumour in the left loin. Investigations had been more than usually fruitful, he had a ++ Wassermann reaction, blood in the urine and a positive result to a lævulose tolerance test for hepatic insufficiency; the latter was thought to be quite out of the way.

Mr. SHONE had no hesitation—he seldom has—in diagnosing hypernephroma invading the liver.

Mr. BRUCE-PEARSON, on the other hand, confidently diagnosed cirrhosis. Mr. MILLER at once jumped up and burst forth with a third alternative—gummata of the liver.

Mr. BLAIKLEY, in view of the double history of syphilis and alcohol, coupled with the tell-tale lævulose tolerance test, felt in complete agreement with Mr. BRUCE-PEARSON, but thought cirrhosis was associated with Bright's disease.

Mr. HOLDEN, in summing up, favoured a diagnosis of gummata of the liver and syphilitic renal endarteritis.

Mr. MILLER told us of a man of 59, who ever since 17 had had attacks of jaundice, and who furthermore had a history of familial jaundice. We learnt he was a case of pernicious anæmia in all probability, though Mr. MILLER had some doubts, even in the absence of a markedly enlarged spleen, whether or no it might be a case of acholuric jaundice, although the fragility of the red corpuscles was normal. Dr. HAMPSON, in answer to questions, gave us the information that in the latter disease the fragility even in remissions of jaundice remained at a low figure; he also told us that a family history of P. A. was not uncommon, and that especially in the East, a long history of this disease, as in this man, was a frequent finding.

The last case was briefly discussed by Mr. POWELL and Mr. SHONE; it was one of spondylose rhizomèlique in a young man, who was suffering from gonorrhœa, and in whom the disease was rapidly spreading, although the hip-joints were as yet unaffected. The discussion waged around the part gonorrhœa played as an ætiological factor; we were left with the impression that quite often the gonococcus is largely to blame in the first place.

So closed a well-spent evening, even if the meeting was smaller than usual and the discussion a little less animated.

Current Cases—II.

A Case of Pneumococcal Peritonitis

THIS patient, V. P., a big, muscular girl of 17 years, was admitted into Lydia under Mr. Steward on the 19th February, having been sent up in the early hours of the morning by her doctor as a case of appendicitis and general peritonitis. Her previous history was of interest, in that she had had three attacks of jaundice the last twelve months previously and accompanied by severe pain across the middle of the abdomen; she had been really ill for a week and had been in bed for a month in all; at the age of 14 years she had two periods, but none since.

History of present illness—Five days previously, on the 14th February, she felt unwell, and having been constipated for three days, took a dose of licquorice, which she repeated on the following evening, when she began to suffer from a dull pain about the umbilicus; this pain was constant, but of increasing severity, and the following day was felt right across the lower abdomen; during this

day she had diarrhœa, passing six loose motions. The following morning, a Monday, although the pain was worse, she went to work as usual, but the diarrhœa continued, and by mid-day the pain was so severe that she collapsed and was sent home to bed; that evening she also complained of frequency of micturition, and of moderate frontal headache.

The next day, Tuesday, she was feeling very ill; her doctor saw her in the afternoon, also at midnight, when he became alarmed, and transferred her to Guy's. At no time had she vomited, although she had nausea at the beginning of the illness.

On admission—The patient appeared very ill, with a temperature of 103°F., pulse 130, respirations 30; her tongue was very dry and thickly coated with brownish fur, her sclebrotics were slightly jaundiced. The abdomen was rather full and moved poorly on respiration; there was general slight tenderness with vague rigidity on palpation. Rectal examination showed definite but slight tenderness on the right side. No abnormal signs were found in the chest, heart, or central nervous system, and the urine was normal.

Progress—During the day the tongue became even more thickly coated with brown fur, while the abdomen became more distended; the temperature rose to 103.5°, but otherwise she remained much the same; she appeared to have a mild peritonitis, but of what nature, it was not known; there appeared to be no definite indication for laparotomy.

On the 20th February, she was a little worse, her pulse rate and temperature remained high, also she was a little more jaundiced about the eyes; the abdomen was markedly distended, and there was thought to be free fluid. The following day, her temperature suddenly fell to normal, but she was altogether irrational in her talk and appeared very toxic indeed; later she became restless and quite noisy, and was delirious. On examining her nervous system, the pupils were seen to be widely dilated, the knee jerks were absent, while the plantar reflexes could not be obtained. A leucocyte count showed only 4,500 c.mm., with a normal differential count. Dr. Douthwaite saw the patient, and while suggesting pneumococcal peritonitis, felt doubtful in face of the low white count. A lumbar puncture showed no abnormality.

On the 22nd February, the temperature began to rise again, signs of encephalitis were even more marked, and there was a marked bilateral positive Kernig, neck rigidity and bilateral extensor plantar reflexes. Twenty-four hours later the patient was more rational, the Kernig's were doubtful, the knee-jerks exaggerated, and the plantar responses indefinite, the leucocyte count was 11,100 per c.mm., with a normal differential count. Lumbar puncture again showed no abnormality. A further twenty-four hours, and she was quite rational, and no abnormality at all could be found in the central nervous system.

On the 26th February, two days later, the temperature rose again up to 101°F.; she again had slight tenderness and guarding in the right iliac fossa, and in the evening a suggestion of a lump; there was slight tenderness on rectal examination. The leucocyte count was 15,500 per c.mm. Two more days and the intra-abdominal lump had become quite evident—incidentally the white count was only 11,000 per c.mm.—and Mr. Steward drained an abscess containing several ounces of thick, rather greenish, pus. The pus on direct examination showed gram-positive diplococci; these could not be cultured, but were presumably pneumococci.

The patient made a slow recovery, and although the abdomen is now almost healed, she, as once before, has suddenly become markedly pyrexial, on this occasion with pain in the chest on respiration, although no rub can be heard.

Comments—The above case was of interest in many ways; in the first place the differential diagnosis was difficult. The history of diarrhœa, led us to search the fæces for dysenteric organisms, and again, coupled with headache and meteorism, to do a widal reaction; again, an acute tuberculous peritonitis was considered. Seen in its entirety the history is perhaps very typical of the varying activities of the pneumococcus, but seen day by day the patient's symptoms and signs were most puzzling. The leukopenia during the most acute phase of the illness is an interesting observation, and suggests that the defensive reaction of the blood was completely overwhelmed; we can only speculate as to the possible results of laparotomy at this stage.

I would thank Mr. Steward and Mr. Douthwaite for permission to publish this case.

J. B. B.

Guy's Hospital Gazette

(ESTABLISHED 1872)

Published on alternate Saturdays. Price 9d.

Editorial and Publishing Office:—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, 12s. 6d. Post Free, payable in advance.

A Journal of Hospital News, Medicine, Surgery and Dentistry

Nomads *v.* Junior Staff.—Fine Win for Nomads

(Special report by "Winger," our Special Correspondent)

THE historic match between the Nomads and the Junior Staff was played at Honor Oak Park on Wednesday, 26th March, before a crowd which made up in quality and social standing what it lacked in quantity. This match, without which the end of the Rugger Season would be but a hollow mockery, was played in a style which upheld the finest traditions of the fixture.

Interviewed before the game both captains were confident of success for their respective teams by a handsome margin. The result, however, was a win for the Nomads, by three goals and a try (18 points) to a try (3 points). This is the first occasion on which the Nomads have won the match and it is only fair to say that they thoroughly deserved their victory. The suggestion that had the Dean been refereeing the match the result would have been different is unworthy and should be ignored.

The game was played at a tremendous pace, neither side giving quarter as the frequent cries of anguish and appeals to the referee bore witness. The Junior Staff, fielding sixteen men, a fact of which the Nomads were in blissful ignorance until the second half when they removed the extra man in a drastic fashion, kicked off and their zeal overcoming their prudence they were brought back to kick off again. With amazing speed and incredible deftness of foot the Nomads' forwards carried the ball into their opponents' twenty five, whence Van Schalkwijk on behalf of the Junior Staff carried it out again. From a subsequent line out the same player gathered the ball and had the Nomads' full back guessing by a long punt ahead ; taking possession once more and finding himself surrounded by defiant defenders he attempted a drop kick at goal at the urgent request of his captain. Failure was the result.

On the Nomads' twenty-five line A. J. D. Lewis had the misfortune to drop a pass and A. R. Marsh, pouncing upon the ball, ran off in all directions finishing up in the third lap with a fine try. From a difficult angle Van Schalkwijk just failed to place the leather between the uprights.

For the next five minutes the play became general, small groups of players could be seen settling their differences in various parts of the field. A blast from Mr. Doherty's whistle, however,united both teams in witnessing an irregular piece of play on the part of Exner, the junior Staff scrum half who happened to be in possession of the ball at the time. From the resulting penalty kick the Nomads made ground by finding touch near their opponents' twenty five. From the throw in T. Morgan broke away and scored, Littledale adding the extra points. (Nomads 5 points, Junior Staff 3 points). Both sides then showed signs of fatigue so the referee kindly blew the whistle for half-time.

From the resumption of play the Junior Staff attacked with vigour and endeavoured by craft and low cunning to reduce the lead. Fast and furious were their attacks, sturdy and relentless was the Nomads' defence. With highly creditable diligence the referee followed each movement until dyspnœa gripped him and the Nomads, ever quick at seizing an opportunity took possession of the egg and by a series of well-timed forward passes, put Littledale in between the sticks. The same player added the extra points (Nomads 10 points, Junior Staff 3 points.)

The Junior Staff now thoroughly roused attacked from the kick off,and muttering incoherent phrases in which the words " bad sign up " figured frequently,strove to keep the Nomads to their twenty five. L. Brown was selected to essay the task of scoring, but he was deprived of the ball, and although running a considerable distance without it, was deemed a failure. W. Mill made a similar attempt,but was deftly tripped before getting into his stride. Van Schalkwijk then chased the Nomadic custodian over his goal line and forced him by very weight to touch down. In a fit of depression the Junior Staff skipper, B. G. Scholfield, was found pushing in the Nomad's scrum and was ignominiously dragged forth by his indignant followers.

The Junior Staff then had the misfortune to loose R. E. Smith, a useful, not to say ornamental forward, with a dislocated elbow. While the injured player was receiving expert attention Littledale scored a try and converted it. (Nomads 15 points, Junior Staff 3 points.)

The play became mainly forward, Brown and Cameron for the Junior Staff,disregarding the ball, fell upon their opponents and grassed five before being required to desist. While a deputation of the Junior Staff approached the referee with a view to persuading him to take a more active part in the game, T. Morgan scored an unconverted try for the Nomads, closing the scoring at Nomads 18, Junior Staff 3. The touch judges now showing signs of fatigue and thirst, Mr. Doherty kindly blew the whistle for " No Side."

The Dinner was, as usual, an unqualified success. Speeches were made, toasts were drunk, stories were told and many old songs were sung.

Teams—Junior Staff—L. W. Cann; E. H. Hudson, D. Ellis, A. R. Marsh, R. E. Robinson; J. G. van Schalkwijk, G. G. Exner; R. E. Smith, W. A. Mill, N. E. Eckhoff, B. G. Scholefield; G. C. Cameron, S. E. Theis, L. Brown, E. T. Conybeare, F. G. Booker.

Nomads—R. B. Sutcliffe; C. K. Robson, O. Ive, C. E. M. de Gruchy, E. J. Littledale; A. J. D. Lewis, A. R. Clarke; H. C. Muirhead, K. S. Southam G. Knight, T. Morgan, R. O. Payne, A. Bowen-Davies, R. W. Stephenson, J. M. Robertson.

Referee—W. D. Doherty, Esq.

Touch Judges—E. C. Hughes, Esq.
D. W. C. Northfield, Esq.

Arsenic

A Clinical Lecture by Mr. H. L. Messenger, M.C., L.D.S., M.R.C.S., L.R.C.P.

GENTLEMEN.—I am very much indebted to Mr. McNeill, who was my dresser at the time, for collecting together the notes of the following case.

Previous History.—It must have been some time in June, 1928, that a man of 27 years went to a dental surgeon with the idea of having a tooth extracted. The one in question was an upper right canine, and as it alone was carious amongst some otherwise excellent upper front teeth, the dental surgeon very wisely and very properly advised the man to have it filled. He agreed to this.

As the excavation of the tooth was proceeded with, it became obvious to the dental surgeon that it would be necessary to extirpate the pulp and an arsenic dressing was inserted for its devitalisation. The man was given an appointment for five days hence, which he kept and the tooth was opened up. On the passing of a bristle into the root canal, he stated that he experienced a stab of intense pain and the dental surgeon inserted a further arsenical dressing.

Pain after Arsenic.—I think I must leave my story for a moment to remind those of you, who have not already recalled them, of the causes of pain during the instrumentation of a tooth which has had an arsenic dressing for what is considered to be the correct length of time. They are three in number.

Firstly, and obviously, the arsenic may not have been left in the tooth long enough. The deeper portions of the pulp are still alive and therefore painful to touch.

Secondly, the arsenic may have had the required time to devitalise the pulp and the bristle may have been passed right through the dead pulp, through a large but in no sense of the term, pathological, apical foramen into the tissues beyond. This would cause pain.

Thirdly, pain may be caused through manipulating a tooth of which the periodontal membrane has become involved in the inflammatory process which one tries to confine to the pulp.

To return to my story, I reached the stage when a second arsenic dressing had been inserted.

Almost immediately the man began to experience increasing pain of the neuralgic type over the right side of the upper jaw, which in two or three days became considerable. He returned to the dental surgeon who replaced the arsenic dressing by a sedative one.

On that same evening he went to one of the Channel Islands for his summer holiday, and any of you who have experienced that night crossing on one or other of the Southern Railway's boats, none of which are particularly well found, will know that it can be intensely cold in the early hours of the morning.

The face began to swell and he was compelled on the next day to go to a dental surgeon in Jersey who extracted the canine and first premolar under gas anæsthesia. I do not know whether there was an abscess sac on the end of the canine root—probably not.

The swelling and pain continued. The left side of the face became involved and the man was very ill indeed.

He went into the hospital in St. Heliers, and was treated with fomentations and injections for a month. I think that the injections were of emetin, but am not sure. Subsequently he returned to England and I saw him here at Guy's some time in August.

Condition on admission.—He had a well established osteomyelitis of the premaxilla and maxillæ. Pus was pouring down the sockets of the incisor teeth; the alveolar processes had that soft-spongy-grating feeling with which one associates extensive necrosis; the breath was foul and the man looked ill.

Treatment.—We extracted the four incisor teeth under a continuous gas anæsthesia and a large amount of necrotic bone came away—about 20 sequestra of varying sizes together with much pus.

To cut a long story short, in addition to the upper right premolar and canine and to all the incisors, he lost the upper left canine and a premolar and proceeded to exfoliate a number of sequestra over a period of six months or more.

More recently he turned out a large sequestrum consisting of the socket of the right upper first molar, which I removed together with the tooth.

It was a matter of great regret to me that I did not see that upper canine tooth after its extraction. Its appearance must have been illuminating.

Diagnosis.—I was rather inclined to jump to the conclusion that the original cause of that osteomyelitis was arsenic. And there were two ways whereby the arsenic could have started the trouble. Everything seems to have been quite all right up to the time when the first arsenic dressing was removed. If arsenic caused the original damage to the tissues in the region of the canine tooth, thereby permitting the subsequent infection by a streptococcal organism in the manner which I have related to you, there were two ways of entrance.

The arsenic dressing may not have been sealed in properly so that a leakage occurred giving rise to an ulcerative gingivitis, then a periodontitis,then an osteitis and then necrosis, or, the arsenic may have found its way through the apical foramina of the tooth causing immediately the same symptons. In either case a streptococcal infection supervened, the organism coming directly from the mouth or via the blood-stream.

Mr. Bulleid tells me that it is quite uncommon to find anything but a streptococcus in these cases which follow on from arsenic necrosis. A staphylococcus is rarely met with.

There was at the late stage at which I first saw the patient, no definite evidence that arsenic was the cause of this unfortunate affair, and I had to consider other possible conditions.

The differential diagnosis from arsenic necrosis was as follows :—

Firstly, the introduction of septic material into the root canal or through an apical foramen when the first arsenic dressing was changed. You remember that the man complained of a stabbing pain when the bristle was passed, and we have no evidence that it was a clean one.

Secondly, the infection after exposure to cold, which undoubtedly occurred on his sea-trip, of tissues which had been damaged by arsenic, sepsis or partial loss of vitality.

Thirdly, the infection from an adjoining tooth or from elsewhere in the mouth of tissues of reduced vitality.

I have been quite unable to come to a definite conclusion as to the cause of this infection, but I have brought the case to your notice because it illustrates perfectly well what may happen if arsenic is used too freely.

Since getting together the material for this lecture, a further case which might have been serious, and still may be, has come to my knowledge. A girl, 20 years of age, went to a dental surgeon about a first lower permanent molar, which was carious.

A second dose of arsenic had to be inserted and was allowed to remain in about two days too long. The result was that the tooth became periostitic, as the saying is. The dental surgeon removed the pulp tissue from the pulp cavity proper, but left it in the root canals. He further completed the filling of the tooth by inserting a mummifying paste with an amalgam filling on top.

Infection had supervened and an alveolar abscess formed with a swollen face and all the rest of it. I extracted the tooth as soon as the case came into my hands, and their is now necrosis of the outer alveolar plate and a portion of bone underlying.

Here again is sepsis supervening on the damage done by arsenic. Now it is most important when arsenic has spread through the apical foramen that every scrap of pulp tissue should be removed so that you may at least get rid of all the arsenic from within the tooth.

I want to talk to you about certain points in the clinical use of arsenic in order to prevent you from having such unfortunate affairs when you get into practice yourselves.

First and foremost, as to the preparation of the cavity to contain the arsenic dressing. If you have reason to believe that as a result of excavation you might reach the pulp, set about first of all to prepare the edges of the cavity, and pay special attention to the cervical edge if the neck of the tooth happens to be involved. If it is at all difficult of access, it is as well, after the caries has been removed, to build up a wall of osteo and convert the cavity into one involving the occlusal surface of the tooth only.

It is desirable to place the arsenic fibre in one of two positions, according to the condition of the cavity. If the pulp is exposed, place the fibre on to the exposure very carefully and keep it in place with a pulp cap.

The easiest way to manipulate a pulp cavity is as follows—Smear the head of a rounded burnisher with vaseline. Touch the pulp cap on its convex side and it will adhere. Place the pulp cap into position in the cavity and the melting vaseline allows you to withdraw the burnisher and leave the pulp cap behind. This works quite well with a celluloid one, but not metal.

If, on the other hand, a layer of carious dentine covers the probable exposure and its removal would

be painful, then it is best to place the arsenic in contact with as sound dentine as possible, for, as you know, all dentinal tubes lead to the pulp.

On the assumption that the caries has been removed entirely from the edges of the cavity and the bulk of it from the rest, and that the cavity has been so shaped up as to retain a non-adhesive filling —you are taking no risks—the next point is to consider the material with which and the manner in which to seal the dressing. For this purpose there are available gutta percha and oxyphosphate of zinc cement.

In the case of the former the cavity is mopped out with oil of cajuput and the partial solution of the warm gutta percha in this oil forms a water-tight filling.

In that of the latter, the cavity is dehydrated with alcohol or chloroform and the osteo adheres firmly to the cavity walls. Zinc oxide and cloves may be substituted for the oxyphosphate of zinc.

I always use gutta percha myself, for it is easiest and quickest to insert and remove.

To guard against the mishap of arsenic passing through the apical foramen, obviously care must be taken to find out that the tooth has not an open apex. Therefore, the knowledge of the dates of eruption of the teeth and of the period which elapses before the roots are completely formed, is essential.

The devitalisation of a temporary tooth is an unusual event and probably the second molar is the only baby tooth likely to undergo this process. Nevertheless, I must remind you that the apices of the baby teeth are closed 12 to 18 months after their date of eruption, and these roots start to absorb a rather longer period before the date of their loss. Therefore, arsenic may be inserted, for 48 hours only by the way, into a second baby molar between four and eight years of age.

As far as the permanent teeth are concerned, the first molar erupts at $6\frac{1}{2}$, the apices are closed at $9\frac{1}{2}$, so to be on the safe side, 10 is the earliest age at which to use arsenic.

The roots of the central incisors close at ten and of the lateral incisors at eleven. The premolars erupting at ten and eleven have their apices closed at twelve. The length of the canine root is variable; the tooth erupts between nine and fourteen and the apex is closed between fifteen and sixteen.

The second molars roots are closed at sixteen and those of the wisdom tooth at twenty one.

If you are in any doubt as to the condition of the apex, do not hesitate to make use of X-rays.

The ideal pulp for devitalisation with arsenic is a young one, and if the exposure has been made accidentally at the end of the cavity preparation, these are the happiest conditions for its successful extirpation.

The more the pulp approaches a condition of pulpitis with accompanying periodontitis on the one hand, or fibroid and calcareous degenerations on the other, the greater the risk and danger attendant on the use of arsenic. In fact, you must never use arsenic if periodontitis is present.

A young healthy pulp requires four or five days in which to die, but an old hoary veteran which has survived the irritation of a metal filling for many years may take six months or more. An adult pulp takes seven days, generally speaking.

There is one point which I want to mention in connection with opening up a pulp cavity after arsenic.

You know, as a result of clinical experience, that when you are proceeding to open up a pulp cavity, the patient frequently experiences pain as your bur goes in for the first time. Subsequently the pulp turns out to be quite dead. I think that it occurs in teeth in which there has been no original exposure and it is possible that the symptom may be due to pressure. An increased tension is produced by the bur as it goes through and the pressure is transmitted through the dead pulp to its point of contact with living tissue beyond. Do not be tempted to insert a further arsenic dressing without thorough investigation.

Arsenic, antimony and chromium form compounds which have many physiological and chemical points in common. The oxides are powerful caustics. Internally, these compounds are severe-intestinal irritants. Arsenic is readily absorbed and traces of it may be found in the uttermost parts of the body post-mortem.

The arsenic in which we are interested is the oxide, commonly called arsenic or may be white arsenic, of chemical formula As_2O_6. It is a heavy white powder soluble in 10 parts of boiling water and having a dosage of 1/60 to 1/15 gr.

The most convenient form in which to apply arsenic to a pulp is in that of fibre. Such fibre is made by impregnating cotton wool with a solution containing arsenic oxide 50% and other drugs such as creosote, morphine acetate, oils of cassia and wintergreen and cocaine 2%.

The smallest portion of fibre which it is possible to handle is sufficient for the purpose of pulp devitalisation.

We also use arsenic empirically in the treatment of gingivitis, and Fowler's solution is a convenient preparation for the purpose. Fowler's solution is liquor arsenicalis and it is a 1% solution of arsenic.

It is best applied to the gums in the following solution :—

R. Vin. Ipecac.	oz. i
Liq. Arsenical.	dr. iij
Glyerin.	dr. i

Misce.

Further, arsenic is used in minute doses as a tonic, and we found it of great value out in Salonica during the War. We used to give it to men who had had far more quinine than was good for them in the treatment of malaria in order to deal with the anæmia and debility following.

Then as you know, arsenic as an organic compound is injected intravenously in the treatment of syphilis in its various stages.

Now, in bringing these remarks to a conclusion, I have only to indicate to you the relative values of the three methods of pulp extirpation which are available. I assume, for the purpose of this comparison that the patient is not very neurotic and that the teeth are not hypersensitive.

The three methods, of course, are arsenic, pressure cocaine and local anæsthesia.

The great value of arsenic is that it is doing its job in the interval between appointments. In practice it is the custom to make the first appointment a short one in order not to run the risk of wasting time.

Such an appointment is not long enough to remove a pulp under pressure cocaine nor under local anæsthesia. But it is long enough to excavate the bulk of the caries and to insert an arsenic dressing.

Against the use of arsenic is the almost certain pain and aching of the tooth for three or four hours after the dressing goes in and its subsequent uneasiness for several days.

Given the necessary time, pressure cocaine is undoubtedly superior as far as lack of pain goes, but there is the risk of introducing septic material into the periapical region.

Local anæsthesia is completely successful in only some 25% of cases and usually requires pressure cocaine to complete the anæsthesia.

It is, no doubt, an advantage with the latter to anæsthetise and extirpate the pulp and then fill the roots in quick succession. The pulp cavity is at any rate exposed to the risk of infection for the least amount of time.

Because I have told you about two accidents which can occur with arsenic, do not fear and do not hesitate to use it yourselves. Seal your arsenic dressings in securely and join the London and Counties Medical Protection Society.

Correspondence

Guy's Hospital '89 Club

To the Editor of the GAZETTE.

SIR,—The above Club are holding their Thirty-Fourth Dinner on Wednesday, May 14th, at Romano's Restaurant, 400, Strand, W.C.2. Dr. James Robertson will be in the Chair.

I should like all the members of the Club to keep the date open and make an endeavour to be present.

Notices will be sent out in due course.

GERALD S. HOVENDEN,
Hon. Sec.

99, Church Street,
Barnes, S.W.13.

A Memorial to Sir Alfred Fripp

To the Editor of the GAZETTE.

SIR,—I am writing to you as an old friend of Sir Alfred Fripp, and as a Governor of Guy's Hospital, to enlist the sympathy of your readers for a scheme which you have probably already seen mentioned in the daily press—a scheme for an Alfred Fripp Memorial.

Sir Alfred Fripp, as you know, was closely associated with Guy's as student, surgeon, and Governor for over forty years. He gave his life to his profession, and he died in harness.

That life can perhaps be best summed up in the single lovely phrase, " All sick persons and young children." Therefore, to perpetuate his memory best, let us do something to perpetuate that life's work. Though all the world was his parish, children came first. So it is proposed that all who knew him, or knew of him—and who did not ?—shall be invited to subscribe according to their means and inclination, to a Memorial Fund to be devoted to the development and extension of the Children's Department in Guy's Hospital, for the purpose of endowing cots, building a new ward, or in such other manner as the Governors of the Hospital and Sir Alfred's own relatives may decide. No tribute would have pleased him more. Indeed during his last days anxiety about the Children's Department was his only care.

The Trustees of the Fund will be Lord Lonsdale, Wilfred Godfrey, Esq., and myself. Subscriptions may be sent to, and will be gratefully acknowledged by The Honorary Secretary, The Sir Alfred Fripp

Memorial Fund, 145, Cheapside, E.C.2. These may be large or small, like the people whom he befriended. Two characteristic donations have already been received by us—a promise of a thousand pounds from those truly practical philanthropists, The Froth Blowers, and a sum of ten shillings raised by farthings among the children of a County Council School in one of the poorest districts of London. The total sum subscribed will be handed intact to the Governors of Guy's Hospital, to be devoted by them to one or more of the projects mentioned above.

Your obedient servant,

IAN HAY BEITH.

17, Queen Street,
W. 1.

Sport

Rugby

Guy's v. Bart.'s

Inter-Hospital Cup Final

AT Richmond Athletic Ground on Wednesday, March 19th, after one of the most enjoyable and exciting cup-finals seen for some years, Guy's succeeded in retaining the Hospitals' Cup, when they defeated St. Bartholomew's by a goal, a dropped goal, two penalty goals and a try (18 points), to a penalty goal and two tries (9 points).

Fortunately the weather kept fine, and although a keen wind made the spectators shiver a little, the many thrilling incidents which occurred during the game made them forget the discomfort of the cold.

Unlike other cup-finals, there was nobody in fancy dress, but before the game started there was a good deal of scrimmaging and ragging between the students of the respective hospitals, and several attempts were made to climb the posts in an effort to attach the colours of their favourites to the top of the uprights.

As the players came on the field one of the cross bars snapped under the weight of one or two of the enthusiasts and the start was delayed a few minutes until the fracture was mended with a scarf.

Owing to injuries the composition of both teams remained in doubt until the last moment, but finally each side was able to turn out at full strength. It was generally anticipated that there would be little to choose between the teams and a great deal depended upon whether the Guy's forwards could hold the formidable Bart.'s pack, which is recognised as one of the best in town.

After the rather indifferent displays of the pack in recent matches, it was not surprising to see J. P. O'Shea included in the side to do the hooking, and there is no secret in stating that it was chiefly due to the impression that Sam Tucker formed of his capabilities when Bristol played Guy's the week previously, that influenced the committee in their choice. Despite the fact that the Bart.'s pack were the heavier, the Guy's forwards played a magnificent game, and although early in the second half they were overweighted and were compelled to defend their line desperately, they fought back and in the closing stages were well on top.

Although it would be invidious to pick out individuals, everybody will agree that nobody worked harder than Popplewell, who, besides doing his share in the scrums, always found time to assist Eustace in keeping a careful eye on Taylor, the Bart.'s scrum half. Hogbin's magnificent goal-kicking was a tremendous asset to the side and O'Shea thoroughly justified his selection. Both teams are to be congratulated upon the fine sporting spirit which existed between the two sides, also in their endeavours to open up the game whenever possible. As a result, there were some excellent bouts of passing between the backs which kept the game in a state of fluctuation all the time. All the passes were taken at a good speed and the timing was first rate.

Of the backs, nobody stood out more prominently than Windsor Lewis, who played a great game for Guy's. It was mainly due to his clever anticipation and untiring efforts to create openings whenever the opportunity presented itself, that enabled the backs to figure so prominently, and his two solo efforts, one in the first half, when he dropped a perfect goal, and his splendid try in the closing stages will be remembered for some time. He was ably supported by the threes who backed up each other admirably, whilst at full back, Ryan played a very steady and safe game and kicked with excellent judgment.

The opening phases of the game went somewhat in favour of Guy's, who at the end of five minutes took the lead as the result of a clever move initiated by Windsor Lewis. The ball came loose just inside the Bart.'s half and Windsor Lewis seized the opportunity to cut through the defence before passing to Guy Morgan, who at the right moment gave Johnson his chance. Special mention must be made of Johnson's effort as he had to run at least 30 yards and with the backs converging on him, he just swerved by the full-back, and although

tackled by three opponents on the line, he managed to touch down in the corner for an unconverted try.

Guy's did not retain their lead very long as they were penalised five minutes later and Capper landed a fine penalty goal from an awkward angle. Just prior to this Bart.'s missed one or two good chances to score. On the first occasion J. D. Powell on the left wing, only just failed to collect a punt ahead when he had a good chance to run in, and J. A. Nunn narrowly missed dropping a goal when placed in a good position.

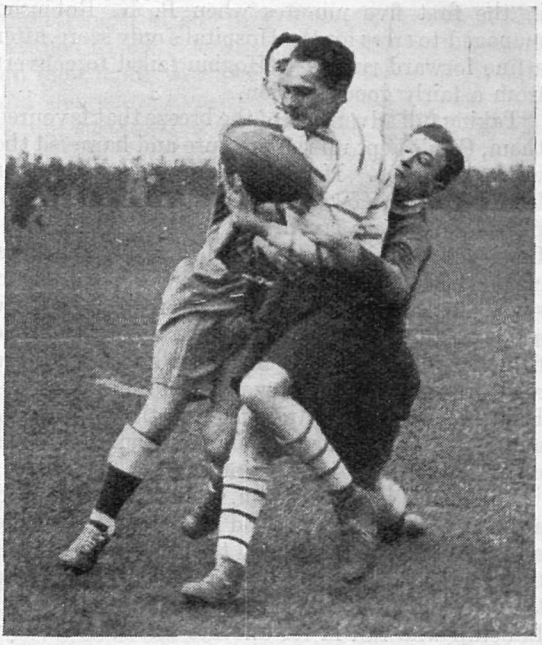
From this point, Guy's, by some splendidly-judged passing all along the line, and a good kick to touch in their opponents' 25, kept up the pressure until the ball came out to Windsor Lewis. The latter ran across field leading the Bart.'s backs to suppose that he was about to initiate a back movement, but when he reached a position in front of the posts, he turned inwards and without a moments hesitation, dropped a beautifully balanced drop-goal with his left foot to give Guy's the lead again.

This increased the excitement, and with both sides playing an open and attractive game, the ball rapidly travelled from one end of the field to the other. There was not a dull moment and it was not until just before the interval that Guy's felt safer, when Hogbin landed a very fine penalty goal from near the touch line.

The opening of the second half was sensational. Following some loose play in midfield, Windsor Lewis set his backs going beautifully and the ball was sent out to Giesen whose pass to Robinson was very cleverly intercepted by Prowse. Running very strongly from the half-way line, he slipped past Ryan and crossed for an excellent try, which Capper failed to convert from a good position.

Only a point now separated the two sides, and Bart.'s, encouraged by this success, redoubled their efforts, and following good forward rushes and good kicking to touch pressed to our goal line. For some minutes they made desperate efforts to cross, and several scrimmages were fought out a yard or so from the line. It looked as though Bart.'s must score at any moment, but when their forwards heeled from a 5 yards scrum, Taylor sent an erratic pass to Reilly, which Ryan cleverly anticipated, and intercepting at top speed he raced away to the Bart.'s 25, before he was collared, and the ball kicked into touch. A minute or two later a disaster befell Bart.'s, when a penalty was given against them for an infringement in a line out, and although 40 yards out and near the touch line, Hogbin rose to the occasion and kicked a glorious penalty goal.

Bart.'s were obviously affected by this unexpected reverse, and with the Guy's pack gaining more confidence the backs saw more of the ball



and set up several attacks which kept Bart.'s well inside their own territory.

On one occasion Windsor Lewis broke through, and giving a reverse pass to Johnson the latter was only stopped in front of the posts and a few yards from the line. Soon afterwards Lewis started a similar movement in the Bart.'s 25, but instead of passing he flashed through a surprised defence to score a magnificent try between the posts which Hogbin easily converted. This practically settled the issue, and beyond one or two attempts to break through by Taylor, the latter was well watched and the attacks broke down before much ground was made

Just before the end, Giesen made a fine individual attempt and was only caught after running half the length of the field. It was not until the game was over that it was found that Giesen was rather badly concussed early in the first half, and remembered very little of the major portion of the game.

All the members of the team are to be congratulated upon their excellent display and splendid team work.

This was the 50th year of the competitions, which was started in 1875, and Guy's have now won the trophy on 24 occasions.

Team.—D. F. Ryan ; T. G. Robinson (Captain), J. E. Giesen, W. G. Morgan. A. G. Johnson ; W. H. Lewis, R. J. Eustace ; J. R. F. Popplewell, C. D. Malone, R. A. P. Hogbin, J. S. Batchelor, T. Morgan, J. S. Batchelor, L. I. S. Campbell, J. P. O'Shea.

Guy's v. Bristol

AT Honor Oak Park on Saturday, March 29th, Guy's played their last match of the season and were again heavily defeated by Bristol by two goals and four tries (22 points) to a try (3 points).

It was most unfortunate that owing to injuries, illness, and other causes, Guy's had to take the field with such a depleted side. In fact, only seven of the team that represented the hospital in the cup-final were able to turn out—Popplewell, Malone, Robinson, Johnson and Eustace, all being notable absentees.

Our visitors brought a powerful side to town and although he was still unfit to play, Sam Tucker, the English captain was present, and occupied a seat in the stand.

The Bristol team gave a dazzling display especially in the second half, when aided by the wind, they carried out some wonderfully executed movements. Their pack gave a capital display and were very difficult to hold. The first half was fairly evenly contested and if anything, Guy's had the better of the exchanges. Guy's took the lead

in the first five minutes when P. K. Robinson managed to cross for the Hospital's only score, after a fine forward rush, but Hogbin failed to convert from a fairly good position.

Taking full advantage of the breeze that favoured them, Guy's kept up the pressure and harassed the visitors' defence. However, strong forward rushes led by Tucker, Hazell, O'Neill, Broome and Hale, placed Bristol in a favourable position, but A. J. D. Lewis relieved the pressure by finding touch with a clever kick well into the visitors' 25. Sherman saved Bristol when the Hospital were attacking, by a great run for three-quarters of the length of the field, in which he beat five men and eventually registered a magnificent try which Hazell converted. Rain fell soon afterwards, making the ball greasy and the ground somewhat slippery, but there was no further score before the interval.

Following the resumption, the visitors attacked at once, and following a good run, Moncrieffe made a model opening for Burland to score his first try in the corner. Shortly afterwards, Burland broke through and after making good ground, passed to Lillicrap who ran in for another unconverted try.

Bristol kept up the pressure, but the Guy's defence was sound and W. Lewis, W. G. Morgan and W. H. Lewis tackled exceedingly well.

The visitors attacked again and a smart burst by C. Smith resulted in W. C. Broome, a very fast wing forward, obtaining a try which Collins failed to convert.

Bristol put in some more good work and further tries were registered by Burland and Parsons, the former being converted by Moncrieffe. T. W. Brown, the visitors' full back was at the top of his form and his tackling, fielding the ball and touch finding were superb, whilst Burland, Moncrieffe, Sherman and Collins all played exceptionally well for the visitors.

W. Lewis who made his first appearance as a full-back for Guy's, came out of the ordeal well, whilst Hogbin, Robinson, Morgan and Knight played up prominently in the pack.

Guy's Team.—W. Lewis; E. J. Littledale, W. G. Morgan, H. J. B. Atkins, A. J. D. Lewis; W. H. Lewis, H. D. Cochrane; R. A. P. Hogbin, T. E. Morgan, J. S. Batchelor, L. I. S. Campbell, J. O'Shea, R. G. Knight, G. W. Hall-Smith and P. K. Robinson.

Boxing

Inter-Hospital Competition

THE Inter-Hospital Boxing Competition took place at Hoxton Baths, on Friday, March 14th, before a large crowd of enthusiastic spectators.

The boxing was of a much higher standard this year than any seen within recent years, and although the Hospital did not have the good fortune to win the competition, they did extremely well in the fact that they came third.

Four competitors managed to get into the finals, and but for minor accidents they should very likely have done better than just secure runners-up places.

The finalists were Palmer (fly), Wong (feather), Timpson (middle) and Yendoll (light heavy). All did extremely well, Palmer giving a great exhibition of speed and forcefulness. Wong fought really well, and it was only the damaging of his hand that prevented him winning his final bout instead of having to scratch on the second round. Timpson and Yendoll both deserve to be specially congratulated. Timpson fought two bouts before his finals and deserved more than his runners-up medal. Yendoll gave 1½ stone away to his opponents, a great handicap, and yet he won two fights to get to the final round.

Stamm (welter) fought heroically for a novice, with only about a month's experience, and with a little more practice is bound to make a good boxer.

Johnson (light) fought pluckily and was unfortunate in not having someone to fight who could draw his best from him to a greater advantage.

We wish to thank all the members of the staff and other supporters for their encouragement during the evening, and hope that we shall have the pleasure of hearing them at the competition against the Film Artistes at the Stadium, on April 1st.

Greater enthusiasm was shown by the members of the boxing team themselves than has been for a long time, and we hope that they will try and keep this enthusiasm going and win the competition next year. With a little encouragement we are sure it will be accomplished.

Results—St. Thomas's	30	points.
London	19	points.
Guy's	15	points.

Fencing

Guy's v. R.N.C.

ON Tuesday, March 11th, the Fencing Club concluded a very successful season, by beating the Royal Naval College by 10 defeats to 17. In the foil, A. W. Holman, making his first appearance since his illness, was unlucky not to win more than he did. He was well within his opponent's guard on several occasions, but lacked distance. J. F. Morris fought well, but

was inclined to be very wide in his parries, which lost him his last fight.

In the epée, D. H. Irish, fighting for the first time in a match with this weapon, did extremely well to win two of his three fights. He showed to advantage the value of a "point in line" The sabre event which was fought last showed where the strength of our team really was, and in this weapon Irish and Morris were at their best, winning all their fights with comparative ease. S. Wright did not show himself to advantage owing to a sprain sustained in the first fight.

Hospital Information, etc.

Pass List

ROYAL COLLEGE OF SURGEONS OF ENGLAND, L.D.S.

FIRST PROFESSIONAL EXAMINATION

February, 1930.

PART I

Dental Mechanics.

R. J. Eustace
C. R. Stone
A. T. Gibb
G. G. Hardie
T. Ireland
E. N. Lewis
M. W. Pilcher
R. W. Ross
H. Milligan
J. C. Fry
S. S. Gill
C. W. Holmden
B. Law
C. C. R. Mailer
C. S. Pitt

PART II

Dental Metallurgy

R. J. Eustace
L. G. Blackham
C. K. Brown
J. C. Dominick
J. H. G. Tensom
R. W. Gollings
F. C. Hampson
T. Helmer
R. A. Johnson
L. G. Lyle
D. C. D. Mathews
H. P. Rees
J. W. Rose
S. P. Saunders
H. A. Stranger
R. B. Sumerling
G. L. B. Thurston
A. W. Turner
W. E. A. Watson
K. J. Whitten
C. R. Stone
F. J. Bloor
J. T. Cramp
D. A. Fairfax
H. Gibbs
C. B. de V. Green
C. J. Hartley
J. R. C. Hindle
H. Kenaar
J. F. Paterson
P. K. Robinson
B. W. Sage
L. B. Somerville-Woodiwis
H. R. Stubbs
H. V. Sydenham
H. C. Tippett
H. C. Walsham
T. E. W. Whitling

PART III (a)

Anatomy and Physiology.

L. G. Blackham
G. G. Ellis
R. T. Garner
H. Milligan
T. H. Chignell
A. C. Fuller
B. Law
M. W. Pilcher
J. W. Rose
B. W. Sage
W. G. Scoble
H. R. Stubbs
R. W. Ross
S. P. Saunders
P. A. Sloane
K. J. Whitten

PART III (b)

Dental Anatomy Physiology

A. S. Bradshaw
G. B. Brummitt
E. L. Clark
J. E. Darlow
G. T. C. F. du Plessis
K. C. Gebbie
R. J. G. Grewcock
J. T. Holford
W. Hughes
C. V. Kark
J. W. Mansie
R. H. G. Neave
J. A. Sidebottom
L. H. Smith
G. O. B. Widdowson
F. R. M. Willis
R. W. F. Brotherton
F. W. Clare
L. H. G. Cummings
J. C. Dominick
R. L. Etheridge
D. W. Goodman
L. P. Harte
C. L. Hudson
H. S. Johnson
G. S. Lader
F. J. Mardon
S. R. Peatfield
J. W. Small
W. J. Wheatley
D. J. Wandless
R. W. Tuck

FINAL EXAMINATION

PART I

Surgery

A. M. Garman
A. B. Palmer
W. D. P. Evans
H. R. Heathcote
J. J. Cochrane
T. A. Freeman
C. V. Harries
T. D. Popplewell
C. P. B. Reed
C. R. K. Smith
D. S. Wilson
H. C. Norman
K. P. Smith
J. Barnes
T. A. Chandler
G. M. Davies
J. H. R. Goffney
E. A. Mayston
K. E. Pringle
W. K. Scantlebury
R. A. Sykes
A. C. R. McLeod

PART II

Dental Surgery

A. M. Garman
G. B. Palmer
J. Barnes
C. G. Baker
A. J. D. Gibbings
C. E. W. Kurty
H. M. Selmann
R. E. Wiles
H. C. Norman
K. P. Smith
H. R. Heathcote
A. T. Gibb
J. A. C. Hunter
T. A. Sicklemore
W. R. J. Wood

UNIVERSITY OF LONDON.

SECOND EXAMINATION FOR MEDICAL DEGREES.

March, 1930

PART I

G. T. Balean
C. J. F. Blumenthal
D. J. Clarke
W. T. J. Fowler
W. H. Hamilton
C. F. Heys
T. E. Howell
N. W. Irish
N. M. Jacoby
J. B. H. McArthur
J. McA. McArthur
A. G. Edwards
R. S. Ellis-Brown
J. F. A. Foster
D. W. C. Northfield
D. S. Piper
L. I. Sobiya
L. N. Trethowan
S. H. Wass
P. A. Wilkinson
B. L. E. Wong

SOCIETY OF APOTHECARIES OF LONDON

March, 1930

Surgery

*C. Skinner

Midwifery

G. Smith

*Now holds Diploma.

ROYAL COLLEGE OF PHYSICIANS

M.R.C.P.

S. C. Lewsen
W. M. Ramsden

UNIVERSITY OF CAMBRIDGE

M.B., B.Ch

E. L. Graff

Papers by Guy's Men

G. Gill Carey. Objective tinnitus, *Proc. Roy. Soc. Med.*, 1930, xxiii, 732.

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V. E. Lloyd and N. L. Lloyd. The Urinary Excretion of Novarsenobillon in Syphilis and its Relation to Toxic Effects, *Brit. Jour. V.D.*, 1930, 1.

W. A. Mill. Osteomyelitis of the Temporal Bone, *Proc. Roy. Soc. Med.*, 1930, xxiii, 718.

W. H. Ogilvie. Minor Injuries of the Elbow Joint, *Clin. Jour.*, 1930, 133, 145.

P. Turner. Anal polyp and von Recklinghausen's disease, *Proc. Roy. Soc. Med.*, 1930, xxiii, 597.

Change of Address

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G. B. Longhurst, L.D.S., 3, Athenæum Terrace, Plymouth.

K. O. Parsons, F.R.C.S., 167, Portland Road, Edgbaston, Birmingham.

Surgeon Commander H. L. Peregrine, *H.M.S. Adventure*, Atlantic Fleet, c/o G.P.O., London.

T. L. Vaisey, L.D.S., 1, Earls Court Square, S.W.5. 'Phone : Kensington 2492.

C. B. Williamson, L.D.S., Thornbury House, Cheltenham.

Notice

THE MEDICAL SCHOOL

The following awards have been made :—

Junior Prizes for General Proficiency, 1929-30 (first prize £20, second prize £15, third prize £10.)

The prizes have been equally divided among the following, Falconer, E. D., Grocott, J., McArdle, B.

Michael Harris Prize for Anatomy, 1930 :—Wheatley, P. R.

Wooldridge Memorial Prize for Physiology, 1930 : —Grocott, J.

Birth

BIDDLE—On March 26th, 1930, at Waveney House, Ipswich, to Eileen, wife of E. Biddle, M.C.—a son.

EDS. {J. B. B. P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *19th April* 1930 — *Number* 1089

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MUCH against our will we have been forced to the conclusion that Spring has come. Some time ago we were told that primroses were in bloom in distant woods, but we refused to admit that that was a sign of the times. Later, we found each Sister's room adorned with daffodils, but we were sure they were "forced." Later still we became suspicious when the wards were individually and ruthlessly disorganised by painters and their ladders, but we took heart in our disbelief when we read that conditions on Daytona Beach were good enough only for 186 m.p.h. The loss of an hour's sleep on Sunday morning served not to shake our conviction, but only our tempers. Even spring-cleaning in the College failed to awaken thoughts of sunny hours and summer skies. The Boat Race merely reminded us of the draughtiness of Hammersmith Bridge, and the inevitability of the athletic superiority of Cambridge. The Budget always evokes a cheerless wintry reaction. But at last we are convinced—Easter has come, and as we unearth our grey flannel suit and flick the dust off our week-end suit case, the film drops from our eyes and we see for the first time for many months not the saffron fog of a winter's day, not the smoky fire of a College room, not the naked cachexia of the trees in the park, but the sun in a cloudless sky—the cleanliness of a newly-papered room, and the feathery green of chestnut buds.

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IT is not easy for many of us to realise, as we perform our daily round, so often unproductive of new discoveries, that any stimulus to the advance of knowledge is being enacted in our midst, and so modestly is research work undertaken at Guy's, that we are apt to forget that it is one of the strongholds of the Asthma Research Council, one of the centres of the modern teaching of gastric ulcer treatment, or one of the pioneers of the alkaline treatment of kidney disease. It is thus not surprising that few of us should have realised that another important piece of research is about to originate from this Hospital. Acute rheumatism is a disease of so far-reaching and disastrous sequelæ, that the investigation of any factor in its ætiology must rightly be regarded as a valuable contribution to modern medicine. Diet has, in recent years come to be regarded as an important factor in disease, and it is with interest that we shall look forward to the results which will develop from the organised research into the diet factor in rheumatism which is about to take place under the auspices of the Medical Research Council at the beginning of next month.

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THE following have been elected "Clinicals" for the three months, 16th April to 15th July :—

Mr. J. R. F. Popplewell.
Mr. P. V. Reading.
Mr. J. M. Robertson.
Mr. L. K. Robson.
Mr. W. M. Smith.
Mr. R. W. Stephenson.

We are asked to announce three dinners to be held shortly. The first is the Annual Dinner of the Rugby Football Club, to be held at the Bridge House Hotel, on Thursday, 8th May, at 7 p.m. for 7.30 p.m. All Guy's men, past and present, are invited; tickets 6s. each, exclusive of wine, may be obtained from the Honorary Secretary, Mr. A. R. Clark, and from Mr. W. H. Lewis, Mr. A. J. D. Lewis or the Medical School Office. As the tickets are limited, early application should be made to one of the above.

The second is the Annual Dinner of the Nineties Club, which will take place at Gatti's Restaurant, the Strand, on Wednesday, 7th May, at 7.30 p.m.; Dr. Arthur Spicer, M.C., will be in the Chair. Applications for tickets, 15s. each, should be made to one of the joint secretaries, Mr. E. D. Dowsett, 118, Gloucester Place, Portman Square, W.; or Mr. P. F. Henry, 73/76, King William Street, E.C.4.

Lastly, the Ninth Annual Dinner of the Thirty Club will be held at Gatti's Restaurant on 20th June, at 7.30 p.m. for 7.45 p.m.

Anyone who lunches regularly in the College cannot fail to be struck with the undoubted popularity of the College Catering Club's menus, for it is on certain days almost impossible to find a seat between 1 and 1.30 p.m. This patronage has recently been increased by the addition to our numbers of a large contingent of prospective Membership and Fellowship candidates. The Final Fellowship course at Guy's has for many years been justly regarded as the safest insurance of success in a traditionally searching examination, and we hear that the recently established Membership Course has already emulated that same high standard of efficiency. It is interesting, therefore, to note the development of such excellently organised post-graduate tendencies in a General Teaching Hospital, on the eve of the launching of so thoroughly discussed a scheme as the establishment of a central Post-Graduate Hospital, equipped with a staff of representatives from all the teaching Hospitals, each to serve for a period of a month at a time. Centralisation appears to play so big a part in most of the modern schemes for reform that a certain amount of unnecessary overlap is bound to result, and we wonder whether a post-graduate scheme on so big a scale as is contemplated has sufficient justification when we are confronted with such striking evidence as the efficiency of the post-graduate teaching at Guy's affords.

The Clinical Interpretation of the Wassermann Reaction

A Clinical Lecture delivered at Guy's Hospital, January, 1930, by V. E. Lloyd, Esq., M.B., B.S.

Gentlemen,—The Complement Deviation Test, known as the Wassermann reaction, which has now stood the test of time for some twenty years, holds its place as one of the most frequently performed and one of the most valuable tests at our command.

Although events soon showed that this reaction was not biologically specific, nevertheless this has not detracted from its general value in the diagnosis of syphilitic conditions.

I suspect that some of you are apt to think that the Wassermann reaction is infallible, that a positive result invariably means syphilis and that a negative result excludes syphilis. It is very necessary that you should have a clear understanding of the value of the Wassermann reaction in general diagnosis and in the various stages of syphilis in treated and untreated patients.

There are, therefore, several questions that we should consider without delay.

1. Does a positive Wassermann reaction always indicate syphilis?

There are a few tropical infections caused by spirochætes other than Spirochæta Pallida in which a positive Wasssermann reaction is found, but in this country repeated positive reactions almost invariably indicate syphilis.

2. What relation does the reaction bear to the presence of spirochætes?

The positive reaction appears shortly after the dissemination of spirochætes has occurred and is to be regarded as the expression of a chemical or physical alteration in the blood serum due to the action of the spirochætes on the tissues. The Wassermann reacting substance or state is frequently termed Reagin.

3. Does a positive reaction indicate the presence of living spirochætes?

A definite answer to this question is of the utmost importance in both diagnosis and treatment and in the light of modern knowledge the answer is in the affirmative.

4. Does the presence of spirochætes always give rise to a positive Wassermann reaction?

The answer to this is obviously in the negative, for you are well aware that the reaction is negative during the first few weeks after infection with syphilis and for two or three weeks after the

appearance of the primary chancre. The reaction is not positive until sufficient time has elapsed for the production of Wassermann reagin of sufficient intensity to yield a positive reaction.

If at any time during the course of syphilis the activity of the spirochætes be slight the amount of reagin may fall below the level which is requisite to produce a positive reaction.

This is seen in congenital and in latent syphilis in which negative or doubtful reactions are not infrequently met with over long periods. A positive reaction may be found subsequently if there is renewed activity of the spirochætes.

THE WASSERMANN REACTION IN DISEASES OTHER THAN SYPHILIS.

A positive Wassermann reaction is met with in two tropical diseases, which are of spirochætal origin, but not due to Sp. Pallida.

In Yaws (Frambœsia Tropica), in which positive reactions are very consistent, the infection is caused by Spirochæta Pertenuis. This organism is almost indistinguishable from Sp. Pallida and since the course of the disease and the lesions produced are very similar to syphilis, it is probable that similar changes take place in the blood serum.

In Relapsing Fever, which also is of spirochætal origin, a positive result is found in a high proportion of cases during the acute stage.

Another condition in which a positive test may be found is leprosy ; about 10 per cent. of cases yield positive results.

The effect of anæsthesia, particularly when chloroform is employed, on the Wassermann reaction has been the subject of much discussion. Formerly positive reactions were not infrequently reported, but modern statistics have not confirmed these reports. However, as there is still an element of doubt concerning the effect of narcosis, it is advisable to avoid the collection of blood during anæsthesia.

Among the numerous conditions which have been reported to give positive reactions occasionally, the following are the most important :—

Malaria,
Typhus,
Scarlet Fever,
Tuberculosis,
Chronic Nephritis.

Very little support has been found by recent investigations and it is considered that such reactions are probably due to latent syphilis or errors in technique in the test.

As the false results of the test during pyrexial conditions have given rise to considerable discussion, it is advisable to disregard any weakly positive or doubtful results obtained during febrile conditions.

It was at one time considered that excess of cholesterol in the blood serum could influence the reaction with the production of false positives, but this has been shown to be incorrect.

THE REACTION DURING SYPHILIS.

Acquired syphilis.—During the incubation period of syphilis the Wassermann reaction is invariably negative. This negative state exists through the first week of the primary stage and then gradually becomes positive during the next few weeks. At first doubtful reactions are found, then weakly positive results and finally strong positive results are obtained four to six weeks after the appearance of the primary chancre ; the transition may also be abrupt.

The rate of invasion of the spirochætes, the reaction of the tissues and the rate of production of reagin are not identical in each case. Some cases will, therefore, show a positive result considerably earlier than others.

Result of Wassermann test in Primary Syphilis :—

At the beginning of the primary stage usually negative.

At the end of two weeks positive in 40 to 50 per cent. of cases.

At the end of four weeks positive in 80 per cent. of cases.

At the end of six weeks positive in 90 per cent. of cases.

The immediate institution of treatment in the early primary stage, before the appearance of a positive reaction in the blood, is followed by resolution of the primary lesion and usually by the failure of the blood to yield a positive reaction.

The majority of such cases in this stage do not develop a positive reaction during their treatment nor at any time later. The negative Wassermann reaction in these cases does not provide any confirmation of the diagnosis. Some of you might consider that the Wassermann reaction is not of much help at this stage, but this would be incorrect. The negative reaction indicates that dissemination of the spirochætes and the consequent tissue reaction has not yet progressed to the point at which the Wassermann reacting substance or state is produced ; and in this stage it is possible, with immediate and adequate treatment, to prevent such dissemination or to render it very slight.

Therefore the information given by this negative test is of great value in prognosis, for the results of treatment commenced at this stage are infinitely better than any later stage.

During the secondary stage of syphilis the Wassermann reaction is more likely to be positive

than during any other stage; it is present in 99 per cent. of cases.

Occasionally a case of florid secondary syphilis will give a negative reaction whatever technique is used.

What does this mean? It cannot be regarded as due to lack of dissemination of the spirochætes nor to a low degree of tissue reaction, for both of these are evident in the florid cutaneous lesions, It may be considered to be due to a failure of the tissues to produce the usual amount of Wassermann reacting substance or state, but the reason for this is unknown.

It has been stated in such cases that the prognosis is considerably worse than in those whose blood yields the usual marked positive reaction, but as such cases are few and far between the evidence is very slight.

The majority of patients in the secondary stage give a strongly positive reaction at the beginning of and during the early stages of their treatment. After some weeks intensive treatment with organic arsenical compounds all obvious lesions become healed. Some weeks later the Wassermann reaction will be found to decline in intensity from a double plus reaction to a single plus, then from a single plus to a doubtful reaction, and finally a negative reaction is attained.

The cessation of treatment at this stage will almost invariably be followed by the return of a positive reaction and later, most probably, by a recrudescence of the signs of the disease.

A negative reaction during or at the end of a course of treatment implies no more than that as far as the treatment has proceeded the result is encouraging.

In cases of secondary syphilis there is not infrequently a failure to attain a negative Wassermann reaction after the first six months' treatment, *i.e.*, after two courses of N.A.B., although all apparent lesions are healed. This indicates that the syphilitic infection is still persistent although the cavity is slight. Cases of this type are more likely to suffer from clinical recurrence than those in which the blood has been rendered negative.

Further treatment will usually produce a negative reaction in these cases, but in a small proportion all attempts with the various remedies at our command will fail to alter the strong positive reaction. When the positive reaction persists after a period of two years' treatment with arsenical and other remedies, the condition is termed "Wassermann Fast."

A certain proportion of these cases is due to specific infection of the central nervous system or of the aorta, and later on will present signs of neuro-syphilis or of cardio-vascular involvement. But some few cases may be observed for many years without any sign, other than the positive Wasermann reaction, being noted. It is very tempting to consider that the changes in the blood which give rise to the persistent positive reaction, are more permanent in these cases and that they may persist long after the infection has ceased.

There is, however, little evidence for this suggestion and much against it; for we know that tertiary lesions may appear after an interval of 20, 30 or 40 years from the early stage of the disease, not only when the Wassermann reaction has been persistently positive, but also when there have been periods when the blood has shown negative tests.

THE WASSERMANN REACTION DURING PREGNANCY.

The course of untreated syphilis in women tends to undergo considerable alteration during pregnancy. When infection takes place at or about the time of conception, active signs of disease very frequently fail to develop and the infection remains latent throughout pregnancy. This condition of latency may persist up to and throughout succeeding pregnancies and in fact throughout the whole of the child-bearing period. This latency is not only evident in the clinical signs and symptoms of syphilis, but also to some extent as regards the serological changes.

Thus it is by no means uncommon to find that the mother of a child suffering from congenital syphilis will give no history and no sign or symptom of syphilis, and will present no clinical signs. It has been suggested that this latency is due to the inhibitory action of chorionic ferments on the spirochætes.

Experimental work has confirmed these clinical observations. The course of syphilis in rabbits which have been inoculated with Sp. Pallida directly after conception undergoes marked modification. The primary lesion at the site of inoculation and any signs of generalised infection are much less marked than in non-pregnant control animals. This diminution in the severity of the infection was noted to extend throughout pregnancy and well into the period of lactation.

A considerable number of the rabbits appeared to escape infection completely. There is no doubt that the pregnant state can supply some mechanism which suppresses the disease or modifies it to a marked extent.

Long ago, Colles noted that the apparently healthy mothers of syphilitic children did not become infected during breast-feeding, but that wet-nurses frequently did.

By means of the Wassermann reaction it has been shown that these mothers are suffering from

latent syphilis and therefore have a high degree of immunity to further infection.

However, in some cases of a pregnancy which results in a syphilitic infant the Wassermann reaction is negative. The latency of the infection in the mother is of such a high degree and the tissue reaction so slight that the amount of Wassermann reacting substance is below the level of detection. Some time after the termination of the pregnancy the reaction may become positive.

It is in this type of case that repeated pregnancies may be associated with marked fluctuations in the Wassermann reaction. After the menopause the reaction is likely to become stabilised and remain steadily positive, for the protection conferred during the child-bearing period gradually diminishes, and from now on the lesions of the tertiary stage of syphilis may be expected.

A woman sufferng from latent syphilis who presents a positive or a negative Wassermann reaction may give birth to an infected child, an event which is considerably more likely when the mother's reaction is positive.

The presence of a positive reaction in the blood of the father of a syphilitic child in association with a negative result in the blood of the mother has been put forward as evidence in favour of paternal transmission of the infection, *i.e.*, direct infection of the ovum from the semen without infection of the mother.

THE REACTION IN CONGENITAL SYPHILIS.

A good deal of evidence has accumulated during recent years which indicates that a positive Wassermann reaction given by the blood obtained from the umbilical cord of new-born infants may be due to Wassermann reacting substance which has its origin in the blood of the mother rather than that of the child.

In many infants whose blood shortly after birth gives a positive reaction, it will be found if similar tests are carried out three to six months later a high proportion will show a negative result. The explanation of this discrepancy is the same as in the case of tests performed on the cord blood, viz., that the infant's blood contains substances which have passed from the maternal blood to the circulation of the infant and which are capable of providing a positive Wassermann reaction.

It has been noted during the investigation of infected mothers that of those infants whose blood gave a negative reaction shortly after birth, a certain proportion becomes positive later on and clinical signs of congenital disease may appear. Some of these become positive within a short time, *i.e.*, a few weeks or months, but others do not show a positive reaction until considerably later. The first group are probably examples of infection at or shortly before birth; the second group are born with syphilitic infection in a latent stage; the factors in the production of this latency are probably identical with those in the mother.

I must not lead you to believe that when a positive result is given by the maternal blood that a similar result will invariably be found in the fœtal blood at or just after birth. There is a correspondence in one-third of the cases only; the degree of Wassermann reacting substance is usually less in the fœtal than in the maternal blood.

A woman suffering from syphilis in the latent stage may nevertheless transmit the infection even when her blood gives a negative reaction. You will realise, therefore, from what has already been stated that the mother's Wassermann may be negative yet the child's positive.

For how long does the blood of a congenital syphilitic child show a positive Wassermann reaction? Does it remain positive throughout life in the absence of treatment?

There is no limit in years for its persistence in the blood, but in most cases it undergoes a considerable decline and tends to become negative in adult life.

Tests carried out on large numbers of children have shown that in the presence of active syphilitic manifestations, the Wassermann test is positive in about 90 per cent.

As the infection gradually diminishes in intensity and a stage of latency is reached, so the Wassermann reaction tends to become negative. Any recrudescence of the disease in later childhood, *e.g.*, the onset of interstitial keratitis, is likely, but not certainly to be accompanied by the return of a positive reaction in the blood.

During the period of latency the reaction may fluctuate even in the absence of treatment.

A positive reaction may be succeeded by a negative in a few months. Although such fluctuation is not common it should be borne in mind when considering the value of a solitary negative reaction in a suspected congenital syphilitic. Under irregular treatment fluctuating reactions are by no means uncommon and are due almost entirely to the effect of such treatment.

TERTIARY SYPHILIS.

During your period of study in the wards the majority of cases of syphilis which come under your notice will be in the tertiary or latent stage. As the lesions of the tertiary stage may involve any anatomical structure, and differential diagnosis is frequently difficult, you will no doubt make wide use of the Wassermann test in confirmation of your clinical diagnosis or as an indicator in your clinical dilemmas.

It is therefore important that you should be aware of the percentage of positive reactions in the tertiary stage. In any large series of cases in this stage the Wassermann reaction is never positive in

more than 90 per cent. of cases; and you will no doubt meet an occasional case with a negative reaction. If there is a clear history of specific infection in the past and if there are well-marked signs or symptoms you must not be too disconcerted by the familiar rubber stamp which states rather defiantly—"Wassermann Negative."

It is in the more doubtful cases that your clinical judgment will be swayed by a negative report. Whenever the negative result does not fall into line with your clinical opinion the reaction should be repeated and in such a situation a provocative Wassermann reaction is of value.

PROVOCATIVE TESTS.

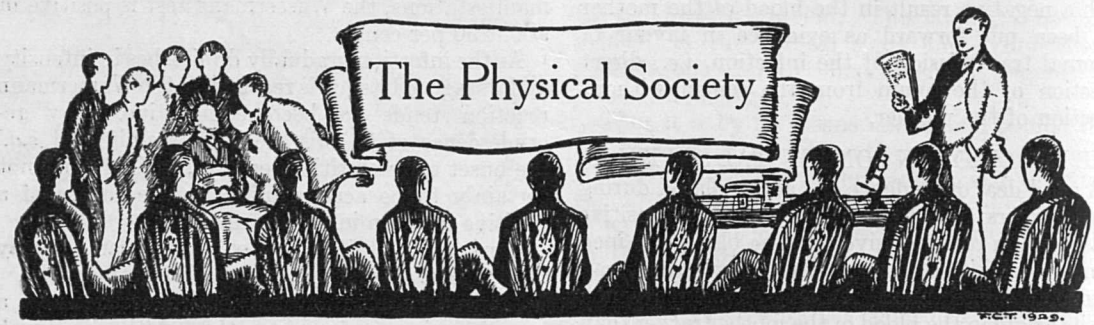
It has been found by experience that a syphilitic patient whose blood has yielded a negative reaction may give a positive reaction after an injection of N.A.B. or similar arsenical preparation. The frequency of this intensification is often over-rated since it is not met with in more than about 15 per cent. of cases.

This procedure is advisable before a suspected case is dismissed as non-syphilitic and also as one of the tests in apparently cured cases.

The explanation suggested for this provocative effect on the Wassermann reaction is that an activation ensues of those spirochætes which are not destroyed by the remedy, with the subsequent production of sufficient reagin to yield a positive result. The most suitable times for subsequent testing of the blood are on the third, seventh and fourteenth days; if only one test be possible the seventh day should be selected.

There are four aphorisms which you should always bear in mind when reading the result of a Wassermann test in a case where you suspect syphilis in its later stages.

1. A positive Wassermann reaction may indicate the presence of syphilis but it does not prove that every lesion is due to syphilis.
2. No case should be labelled syphilis on the strength of a solitary positive reaction when the clinical signs and history are against this diagnosis.
3. A single negative reaction does not exclude syphilis when the clinical signs and history indicate this diagnosis.
4. A doubtful (plus-minus) reaction should be disregarded in the question of diagnosis.



THE last meeting of the season was held on Thursday, April 3rd, with Mr. H. N. HARLEY in the Chair. The six cases which he had collected were worthy of a far less frivolous reception than they got, for although the meeting was a small one, most of the humourists of the Hospital were represented, and although there were none of those long and embarrassing pauses which tempt even the shyest member to his feet if only to break the silence, the golden quality which is associated with silence was also most conspicuously absent in the rather garrulous discussion which took its place.

The meeting was opened by Mr. CAMPS who showed a man suffering from pernicious anæmia, complicated by a number of staphylococcal abscesses, and a discharge of pus per rectum. He had received the orthodox liver treatment for his anæmia, but not only did he dislike it, it apparently did him no good. He was therefore tried with other methods such as stomach extract, and as a last resort—he was given a transfusion—From this time on his anæmia appeared to be progressively decreasing. In answer to Mr. BISHOP, Mr. CAMPS explained that his progress had been conscientiously checked by reticulocyte counts, as well as other routine, hæmotological investigations. Mr. SHONE thought it would have been better if his staphylococcal pyæmia had received primary attention rather than the anæmia, but Mr. READING pointed out that there was something more in the case than a straightforward pyæmia and reminded us that the white count was only 2,000. Mr. BLAIKLEY was surprised that the discharge of pus from the bowel had not attracted more notice and suggested as its source an appendix abscess. Mr. CAMPS was unable to supply him with a bacteriological report on the pus. Mr. LEES offended the sense of proprietory drugs of the firm to which Mr.

CAMPS belonged by suggesting that brands of liver other than Liver Extract were quite good—and Mr. COLBECK restored the hæmatological atmosphere of the case.

Mr. PITT-PAYNE then related the history of a woman who had carried her jaundice through the unsympathetic departments of Rotherhithe, the Annexe and Mr. Hughes' Outpatients before being welcomed into the medical wards, where she was found to have a large liver and spleen and a strongly positive Wassermann reaction. Mr. MILLER confidently diagnosed syphilitc cirrhosis. Mr. CAMPS diagnosed splenic anæmia and syphilis. Mr. SHONE had an ingenious theory to account for the appearance and subsequent disappearance of her jaundice, based on the development and subsequent regression of a hepatic gumma leading to obstruction to and subsequent relief of the passage of bile through the bile ducts. Mr. COLBECK then irrelevantly admitted that he had an intimate knowledge of sailors. Mr. BLAIKLEY suggested that the case might have been transferred to a firm where a endoscopy with a view to ascertaining the condition of the liver would be looked upon with favour. Mr. SHONE agreed that the case was one of splenic anæmia, and Mr. BLAIKLEY dared the physicians to do a splenic puncture. Mr. READING, always a restraining influence on Mr. SHONE, reminded him of the positive direct Van den Bergh result.

Mr. COHEN revealed the indiscretions of an A.H.S., by relating the case of a boy who had had a hæmatoma of the loin incised in the Back Surgery, and who now had a large swelling and a sinus, and pus and albumen in his urine. An X-ray showed some opaque bodies which he did not think were in the kidney substance and he diagnosed an infected hæmatoma. Mr. BLAIKLEY suggested the injection of lipiodol along the track of the sinus. Mr. CAMPS suggested other investigations, but Mr. COHEN confessed that the boy was submitting the next day to the best method of diagnosis—namely, exploration. Mr. RICHARDS was sure it was a pyonephrosis and Mr. ROSENBERG thought it was an infected hæmatoma, but they were on all sides requested to give an explanation of the urinary findings. Mr. ECKHOFF traced the whole pathological process in relation to the clinical signs, and came to the conclusion that as a result of the original injury a pyonephrosis, due to blockage of the pelvis by calculi had burst into the perinephric tissues. Mr. ROBERTSON asked if there had ever been any hæmaturia, and Mr. COLBECK was in favour of diagnosing Wilms' tumour.

Mr. LEES provoked a heated discussion and a multiplicity of diagnoses by showing a young man with lumps on his legs and a cardiac murmur. Mr. MILLER disregarded the X-ray plates and diagnosed sarcoma. He talked about pulsation. Mr. BIGBY was shocked that another osteomyelitis had been " sat on " for a fortnight. Mr. READING fitted the cardiac and bony lesions into one pathology and diagnosed aortic regurgitation and syphilitic periostitis. Mr. SHONE hoped someone would take him seriously when he diagnosed rheumatic fever and rheumatic nodules. Mr. CAMPS could not exclude Paget's Disease, and wanted to inject lipiodol into the marrow cavity of the long bones. Mr. BIGBY thought such boring operations might at least let out the pus. Mr. BLAIKLEY wondered why no one had thought of subacute bacterial endocarditis, but Mr. RICHARDS was sure that it was an aortic regurgitation. Mr. LEES and Mr. ROBERTSON mentioned the only other type of cardiac lesion which had not already been diagnosed—namely a congenital pulmonary stenosis with hypertrophic pulmonary osteoarthropathy. Mr. COHEN had never seen a painful osteoarthropathic lesion. A discussion then ensued on the earliest age of origin of a rheumatic heart, and Mr. COHEN drew the longest bow by recording a case in which a still-born child was found at P.M. to have rheumatic vegetations on its valves.

Mr. ROGERSON showed the case of a woman who had had progressive unilateral exophthalmos for six months, and considered it to be a sarcoma of the orbit. Mr. MILLER had heard of osteomata of the orbit. Mr. LEES thought the symptoms of headache and unilateral nasal discharge fitted well with the X-ray appearances and diagnosed ethmoiditis. Mr. BLAIKLEY pointed out that the temporo-facial nerve had been involved, and thought the X-ray showed the ethmoidal cells to have been invaded by the growth. Mr. ECKHOFF wondered if this couldn't be an osteomyelitis also.

Mr. CAMPS presented a case on which avulsion of the phrenic nerve had been performed in the hopes of abolishing a basal abscess of the lungs and so allowing a bronchial fistula to close.

Mr. HARLEY and Mr. ECKHOFF discussed the relative value of such operations as phrenicotomy, thoracotomy and thoracoplasty.

Mr. COHEN suggested that should a thoracoplasty be necessary the abscess cavity should be washed out regularly in preparation for the operation through a bronchoscope.

Mr. CAMPS mentioned the interesting fact that after lipiodol had been injected through the sinus, the patient had aspirated some into the other lung, and had also swallowed some into the stomach, despite Mr. COHEN's contention that lipiodol in the stomach was dangerously toxic.

"No Appeal"

(A song from an unwritten Residents' Play.)

You've heard about Bartholomew's, you've heard about Rahere ;
You've heard of all the millions that they're spending every year ;
You've seen the great appeal to all to open hearts and purses ;
You've seen the photographic reproductions of the nurses.
The Westminster and Middlesex for radium are pleading,
And Knutsford helps the London with the millionaires he's bleeding ;
But if you gaze around the Park and murmur "What of Guy's ? "
An echo rises up and from the new-sown grass replies :—

Chorus

Guy's isn't falling down, dears,
It's bearing up instead,
Guy's doesn't play the clown, dears,
To gain its daily bread.
Although, and in no petty sense
Some losses we've incurred,
We cultivate the art of reticence
So mum's — the — word.

It may be that the Surgery is verging on collapse ;
The Nurses' Home is weak on its foundation stones, perhaps ;
The Baby Ward no doubt is fit to crumble at a touch ;
We're needing cash to buy some Kaolin for Dr. Mutch ;
Think of the O.P. letters mutely begging for a shelf !
Think of the Asthma Clinic trying hard to spread itself !
But though we know the maxim that it pays to advertise,
We value less publicity than modesty—at Guy's.

Chorus :

Guy's hasn't got a Beacon
A'cutting nightly capers,
We don't make strong men weaken
With sob-stuff in the papers.
Although, and in no petty sense
Some losses we've incurred,
We cultivate the art of reticence,
So mum's—the—word.

S.A.

Chronic Mastitis

A Paper by Mr. C. K. Simpson

MR. CHAIRMAN AND GENTLEMEN.—Among the more lasting of the undoubted benefits of the French Revolution of 1793, was the refuging of Xavier Bichat, then a first year medical student of 22 in Paris, for there under the influence of Desault he published in 1800 his "Traité des Membranes," the first determinate effort to correlate structure and pathology.

The phenomena of tumour formation, however, were yet to evade investigation for another 50 years, when Virchow[3] pursuing the discoveries of Schleiden and of Schwann propounded his now famous doctrine of "omnis cellula e cellula," publishing his convictions in the Archives he had just founded as "A Series of Lectures on Cellular Pathology." He believed firmly that every morbid structure consists of cells which have been derived from pre-existing cells of like nature as progeny ; that a "vitium primæ formationis" was in tumour formation both necessary and logical. In fact, so impressed were early observers with the isolated nature of the proliferation of tumour formation that Wilms[4] extended the argument even to the mixed tumours and was forced to the logical conclusion that such tumours must have arisen in isolated cell rests of compound nature. This is Cohnheim's theory or Ribbert's modification of it followed to an easy conclusion.

Fortunately there occur many examples of tumour formation such as the embryonic kidney tumours[2] or the condition in the breasts here to be discussed which even in one microscopical field belie such a theory. The assumption of an anomaly of these cells—an argument which still leaves the problem as unanswered as before—is entirely unnecessary. There is ample evidence to show that the course of histiogenesis in a typical tumour is towards retention, even in the face of an adverse environment, of the essential features of the parent tissue. But the question of ætiology still forces us to ask : What are the factors inducing the malformation of tissue which results in a tumour instead of a normal secreting lobule ?

Albrecht[5] was the first to grasp the close relation between an anomaly of differentiation and tumour formation, and most important of all showed

clearly the necessity for a tangible exciting cause: a concept of abnormal predisposition was unnecessary. Ribbert[6] himself eventually modified his views to the belief that, for instance, in hyperplasia of the breast, the constant association of hyperplasia with inflammation, trauma, and the changes associated with involution represented the reaction to a secondary environmental stimulus of cells not necessarily predisposed by an anomaly. As an old man, however, and indeed until he died, he was never in his writings convinced, as accumulating evidence has convinced most pathologists of to-day, that the cells responsible for the formation of a tumour are perfectly normal physiological cells, forced, as it were, against their hereditary inclination to cover the stages of a normal development, to assume an abnormal form and to grow in an abnormal way. As Nicholson[2] says regarding fibro-adenomata and chronic mastitis: "I regard tumour formation in so far as it concerns the mammary gland and the tumours under consideration—as a perfectly normal or physiological process which must inevitably take place in every mammary lobule under certain conditions. I thus find the incentive or exciting cause of tumour formation not in an abnormality of the cells of the breast, but in a reaction to a set of abnormal conditions present in chronic mastitis; in a physiological reaction to an abnormal environment."

Thus hyperplasia, a characteristic of the condition, is a perfectly orderly physiological reaction to a stimulus. The cells concerned exhibit no histological traits unknown to normally developed cells; as Albrecht[5] points out: "the question of histiogenesis is hereby included in the more comprehensive sphere of those of organogenesis or of the mechanism of development (and we may add growth) in the widest sense."

I realise that I have here encountered the fundamental difficulty of placing a line of separation between hyperplasia and tumour formation: there is no sharp line. The two merge imperceptibly and hyper- or hetero-plasias, hamartomata and blastomata have all equal claims on such problems as the hyperplasia occurring in chronic mastitis.

We are still, however, confronted by the question "What are the environmental conditions productive of a hyperplasia?" It is to the prevention or avoidance of such an environment that clinical surgery must strive, for no advance is ever to be made by mere earlier treatment of a dangerous breast, or by more accurate criteria of earliest malignancy. Prevention is worth many cures.

ÆTIOLOGY.—Before confronting the morass of ætiology which surrounds the subject, let us pause on the firmer ground of cynicism and comfort ourselves with the assurance that tumours seldom, if ever, occur in a normal breast; indeed that a normal breast is exceedingly hard to find. Hence "quot tumores tot causæ efficientes" and the enormous and involved mass of literature on the subject. Four comprehensive ætiological views must be discussed, however, namely:—

i. Inflammatory;
ii. Traumatic;
iii. Neoplastic;
iv. Involutional;

and to render the examination of greater personal value I have collected, classified and correlated 200 cases of chronic mastitis upon whom biopsy has been performed during the last 10 years in Guy's Hospital. I am aware that as a statistical or true comparative clinical report, such a series is not perhaps entirely representative, but the defect—lack of a biopsy—is, in this condition, very uncommon and hence of relative unimportance.

The term chronic mastitis is an unfortunate one to have obtained popularity amid a prolific but chaotic terminology of some thirty names. Excluding known inflammatory conditions, and this probably excludes mastitis of the newborn, of puberty, and of stasis, the term still includes the atrophic—of local or cirrhosis mammæ nature, and the hypertrophic types; the latter of adenomatous or cystic nature. It is towards the latter, by far the most common affliction, that I wish to direct attention.

i. *Inflammatory.*—Many observers, notably Koenig,[8] Paul,[7] Delbet and Williams, have drawn attention to the frequent combination of fibrosis and localised peridochal or interstitial foci of lymphocytes and plasma cells—a finding occurring in my series in 23 per cent. of cases—and have come to the conclusion that the disease is really a chronic inflammatory one resulting from a long-standing mechanical bacterial or chemical irritation. Hence it was termed chronic interstitial mastitis (Paul[7]) chronic cystic mastitis (Koenig[8]), etc. But no bacteriological evidence of a bacterial infection has ever been forthcoming. The patients were not in any cases pyrexial. Kaufmann[9] who supports the involution theory, regards these mononuclear cells as being associated with resorption processes natural to involution changes, and is convinced that the inflammatory foci which occur far less frequently are accidental in nature. Lane, who believed many cases to be due to toxæmia associated with intestinal stasis, regularly performed colectomy in this Hospital, until but a few years ago, in order to eliminate the source of sepsis. Cheatle[10] has produced clinical evidence of an ascending duct infection, and Keynes in a recent Hunterian lecture, of stasis with chronic toxic

irritation productive of fibrotic and hyperplastic changes and further of subsequent duct carcinomatous changes. However, the theories are not impervious to many criticisms.

ii. *Traumatic.*—Frogspawn under the stimulus of a stilette is capable of developing into a fatherless frog, itself able to reproduce the species; active cell division to a perfect physiological conclusion as a result of trauma. Further, the type of reaction involved by trauma is inflammatory in nature though proceeding naturally in rather a different manner. Why not combine the two facts to explain the hyperplasia and fibrosis of chronic mastitis as Hobbs[11] did? Unfortunately it is practically only in the axillary tail that trauma is clearly followed by a localised or lobar type of chronic mastitic change. Trauma is a very very difficult thing to assess, and although 10 per cent. of cases were associated with an injury of recent date the story in not a few cases was very inconclusive.

iii. *Neoplastic.*—Abundant epithelial hyperplasia with budding, cyst and papilloma formation led Van Saar,[13] Theile,[12] Brissaud and others to insist that this disease should be placed among the blastomata. Schimmelbusch[23] termed it a cystadenoma, Lacoulet a cystic epithelioma, and Aschoff[16] not willing to go so far, termed it a malformation—mastopathia dysplastica. Indeed in many cases particularly those of the adenomatous type, it would be exceedingly hard to disprove the claim to a blastomatous nature. All the changes which lead to a fibroadenoma are clinically present in the lobular form of mastitis (Theile[12]). It becomes increasingly obvious, in studying hyperplasia of the breast, fibroadenoma and carcinoma, that the three are very closely allied. There is strong evidence that hyperplasia of the first stage—of Darling's[14] "germinal epithelium"—may take one or two courses depending entirely upon the environmental conditions. It may proliferate in an entirely benign manner, forming either an adenomatous mastitis or a fibroadenoma: an uninterrupted series of changes is traceable from a normal breast tissue through hyperplasia, chronic mastitis to a fibroadenoma. On the contrary the hyperplasia may take on a malignant character and lead to a carcinoma: such a change is also demonstrable and unfortunately also far more frequent. Hyperplasia of this nature, then, must be regarded as an unstable condition liable to either benign or malignant sequelæ. It really is included in Albrecht's class of hamartomata; arrests of development in which growth has yet remained within physiological limits. One can but regard a neoplastic factor, in view of the diffuse irregular and associated changes involved as well as of the incidence, as merely a contributory factor if indeed a factor at all.

iv. *Involution.*—Herein lies, I believe, the basic factor in the causation of the condition. Long ago, MacKenzie showed how extracts of corpora lutea, involuting endometrium and lactating gland contained hormones capable of inciting activity in the mammary gland. Physiological termination of such stimuli at the menopause causes changes, among other organs, in the breast; changes consisting principally of atrophy of parenchyma and a degenerative fibrosis of the stroma amounting to a normal process of involution. The similarity of the changes and the high incidence of chronic mastitis in the female between the ages of 35 and 50—70 per cent.—definitely associate it with the menopause and suggest it as an abnormal process of involution (Warren[15]) rather than either an inflammatory state or a tumour proper. Prebram[36] went so far as to indicate the cause in the form of an ovarian hormone.

This term of abnormal involution coined in America appears in the present state of our knowledge to be the best concise term to be applied to this class of breast disease: a term to be subdivided into degenerative hyperplastic and degenerative aplastic types, either of which may give rise to the condition of cyst formation (mamelle cystique) formerly designated by Borst,[27] Koenig,[8] Sasse and others as separate entity of the nature of a polycystoma. These cases appearing at an early age may be classed as pre-senile involution changes (Hedinger[24]), for they exhibit identical histological appearances (Berka[25]). Thus the condition here to be referred to as degenerative hyperlasia is neither an inflammation nor a tumour, but probably a very active involution with fibrosis. The element of hyperplasia so suggestive of a blastoma is but a secondary reaction to the rapid fibrosis, and the cysts formed are due to a mechanical blocking of the duct lumina either by active epithelial hyperplasia within or by fibrotic obliteration from without. I realise that I have not explored the fundamental cause of the rapid involution; it is yet a matter of conjecture though most probably in a field to be investigated by the endocrinologist.

Macroscopic Pathology.—Section reveals a tough, indurated, yellowish white mass without definite outline merging into adjacent mammary tissue; its consistency is hard and elastic, entirely unlike the stony immobility of a carcinoma. Areas of necrosis are never seen, the tissue being densely fibrotic.

The vast majority (98 per cent.) of such masses are riddled with cysts of all sizes, there frequently occurring one or more exceedingly large cavities filled with a watery, mucoid, cloudy, green or

brownish, grumous material, usually lying close to the nipple (86 per cent.). Such cysts occasionally harbour macroscopical papillomata, but are seldom hæmorrhagic. The latter condition is probably indicative of carcinoma.

MORBID HISTOLOGY.—It is not my intention to present to you a pleasantly reading textbook description or a comprehensive classification of degenerative hyperplasia. I want to draw your attention towards certain important and interesting features of the condition.

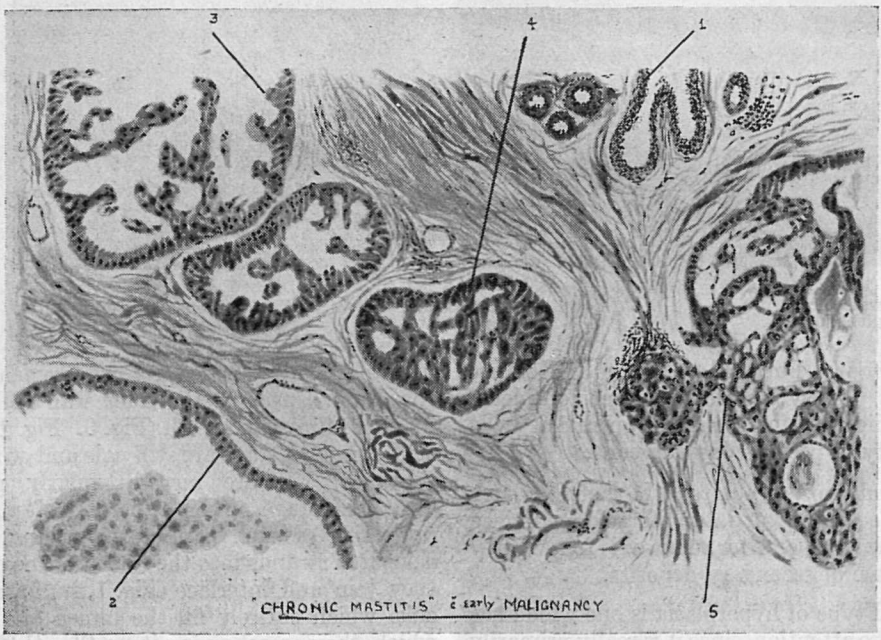
Resemblance is striking in the general features of a section to those of the more scirrhous types of fibroadenoma, although in the adenomatous type of involution the hyperplasia may resemble in its relationships an actively growing fibroadenoma of pericanalicular type: indeed differentiation may be well nigh impossible. Islands of convoluted ducts and lobules lie isolated even at wide intervals by broad strands of hyperplastic fibrous tissue which appears in many places to have compressed the ducts to functional extinction. There occur, however, three distinct abnormalities which to varying degrees are entirely constant; they are :—

i. Epithelial hyperplasia.
ii. Dilatation of ducts or cyst formation.
iii. Presence of adipose tissue.

These changes are in no way isolated or encapsuled as is a fibroadenoma, but bear the histological and clinical distinction of having a diffuse margin, or indeed of involving the whole breast. Let us examine these changes in detail:

i. *Epithelial hyperplasia* occurs in every section examined and is undoubtedly the outstanding histological feature. The types of change, which may lie adjacent to a fibroadenoma, subjacent to an ulcerated eczematous nipple such as obtains in Paget's disease, or yet again diffusely spread throughout an otherwise normal breast are hyperplastic, prosoplastic, and more interesting still, heteroplastic in nature, and exhibit a progressive scale of malformation. Demonstrable often even in one specimen by serial sections, I shall divide these changes into three very definite and consecutive types. The first involves most definitely the basal of the two layers of cells lining the ducts and acini—the germinal epithelium of Darling[14]—and is fairly evenly distributed between the two. Resemblance is reached to a normal desquamating epithelium such as obtains in the œsophagus or vagina, a perfectly benign increase in the numbers of layers of cells resting upon the basement membrane, from two or three to 12 to sometimes even 20 cells deep (Fig. 1, i); those adjacent to the membrane being small and rounded with a large darkly-stained nucleus, and those near the surface becoming larger in relation to the nucleus, fusiform, spheroidal or polyhedral, and with a faintly staining cytoplasm, to desquamate as exceedingly large pale cells with poorly-stained

FIG. 1



1. Hyperplasia
2. Metaplasia { "Woolly" epithelium / "Grouping" and Papilloma formation / "Cartwheel" duct }
3.
4.
5. Malignancy

nuclei often exhibiting karyolysis or pyknosis. The deeper layers may be classed among the physiologically hypoplastic but regenerative "indifferent zones" of Shaper and Cohen.[17] Evidences of such a hyperplasia are the constant presence of epithelial buds limited to the acini and of intradochal or intracystic papillomata (Fig. 2). They acquire a stroma, or in some cases may vacuolate and show the presence of minute cysts. Papillomata in one or other of these forms occurred in 41 per cent. of the cases and with the exception of two cases were entirely unsuspected clinically. Such a form of hyperplasia is best seen in the ducts, though characteristic of acinar epithelium also, and commonly leads to the benign adenomatous type of tumour. Further, such an appearance observed at biopsy would not be considered sufficient indication for a radical operation by a large majority of present day surgeons.

FIG. 2

Clinical evidence, too, points to the fact that such hyperplasia occurring in later life seldom indeed becomes malignant, or after removal is followed by the appearance of secondary deposits.

The second type of hyperplasia is one which has attracted more attention, since it is really primarily a heteroplasia and evidently involves the cubical inner or secreting layer of cells. It is limited to dilated ducts or cysts and may be followed in three stages to the assumption of the form of my third type. The earliest change shown in Fig. 3 is an elongation of the duct epithelium to form a single layer of tall, pale columnar cells, the "woolly" cells which Cheatle[18] and Bloodgood[19] have so thoroughly described. Krompecher[26] believes this epithelium to be a sign of an atavistic change back to the phylogenetic early sweat gland nature of the breast, and calls such a stage a hydrocystoma mammæ; but in view of the sequent changes I am about to describe, this appears to be fallacious. This perfectly benign-looking epithelium is in certain areas invariably seen to be heaping itself up into irregular masses grouped irregularly around the inner aspect of the duct wall rather in the manner of inverted teeth (Fig. 3. Fig. 1, iii). The cells at such a stage are still pale and woolly in appearance, but are now irregularly polyhedral. The final stage of this type of metaplasia is the projecting of such papilliform groups of cells in elongated strands into the lumen of the cyst, where they join and interlace (Fig. 1, iv) forming trabeculæ which entirely fill the lumen of the duct in which they arose, giving it, as Cheatle[20] puts it, a "cartwheel" appearance.

The third and last type of this heteroplasia merits much attention, but in another sphere, for it is the stage where, although malignancy may yet be doubtful, suspicion based on observation and clinical experience justly fears the change to be but a short step in advance. It is the type

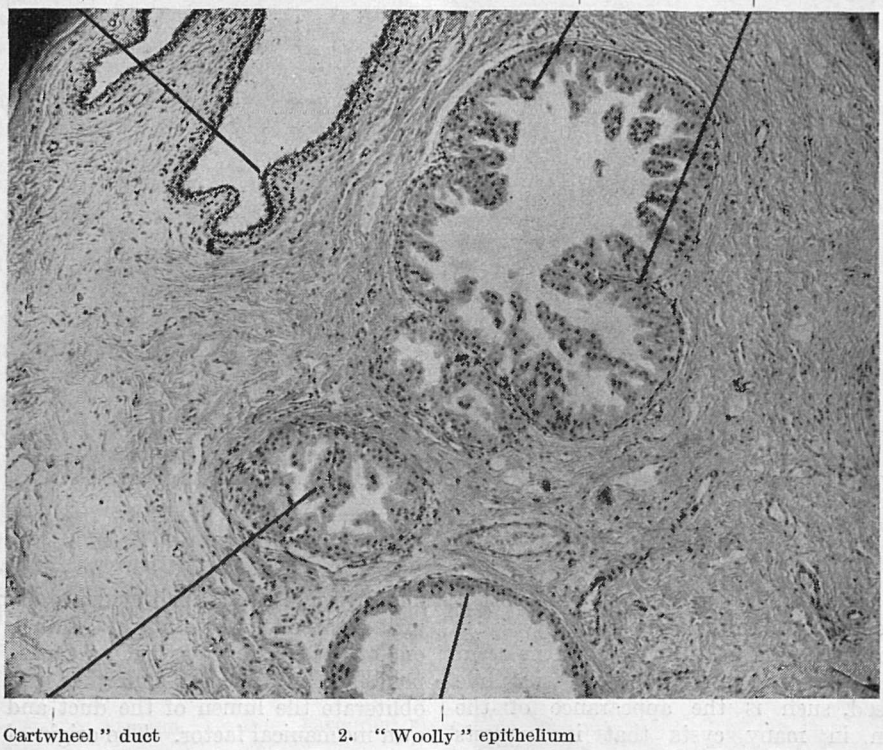


FIG. 3

labelled by the morbid histologist as " chronic mastitis with proliferation " as an indication that the degree of the latter is such as to warrant the term dangerous and to call for an immediate radical operation. Direct continuity is obvious between the " cartwheel " appearance just described and this condition where the cells lining the trabeculæ become larger and more irregular and stain more deeply, frequently containing two well-marked nucleoli, and showing mitotic figures. The spaces between the columns of cells become obliterated and the cells, spheroidal from reciprocal pressure, form a solid spherical mass which only too frequently completes the final local stage of malignancy by rupturing the basement membrane and elastin fibrils, and proliferating actively into the corium (Fig. 4. Fig. 1, v). No observer now could cast doubt upon the malignancy of the cells concerned, and hence their fate must be discussed in another sphere. In passing, mention should be made of the care necessary sometimes to distinguish between such cells in the corium and reticulo-endothelial cells, giant cells such as are so often seen at the site of old ligatures, and large mononuclear cells such as collect around, and obviously drain, cysts containing xanthinous fluids.

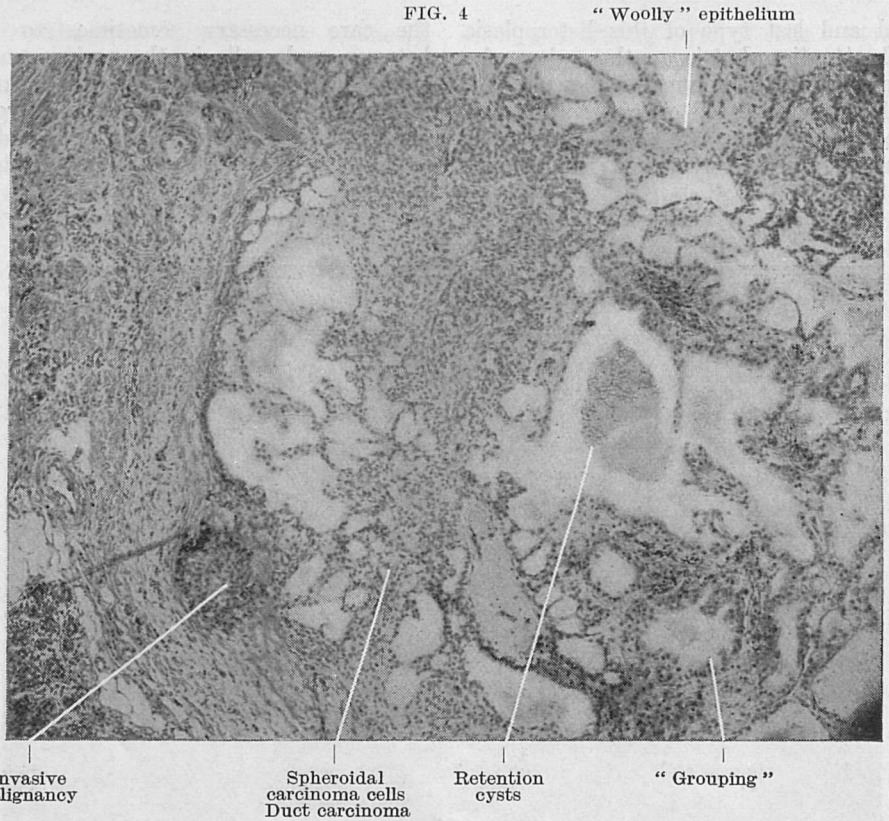
ii. *Cyst Formation* is of two types :—

i. That of obvious duct origin;

ii. That of doubtful origin;

and of these the former is by far the easier to discuss. The cysts vary in size from small dilated ducts to large clinical cysts, the former having the histological appearance of being collected into small groups lined by low columnar epithelium with nuclei of alternating depth, and filled by a homogeneous eosinophile fluid. The impression of grouping is artificial, being caused by excessive convolution of the ducts ; a characteristic of degenerative hyperplasia. The large cysts may reach the size of a tangerine and be filled by watery, mucoid, cloudy, cream-like fluid to butter-like caseous, brown or green, grumous material with much atrophic swollen hyaline epithelium. Further, they are frequently surrounded by collections of lipoid containing giant cells—the " pseudo-xanthoma " cells.

FIG. 4



The cysts of more doubtful origin have lost a diagnostic epithelium and may be filled by a pale mass of desquamating cells, by a solid mass of proliferating cells, or by a homogeneous eosinophile fluid. Indeed, such is the appearance of the proliferation in many cysts that it suggests strongly that the dilatation is the result of the hyperplasia and not, as has so long been believed, the mechanical result of fibrous constrictions and obliterations of certain ducts. Cheatle[29] says: "I do not believe that cysts of the breast are mainly due to mechanical obstructions. The appearance of the epithelium in these cysts seems to indicate that the proliferation is causing the cyst rather than the reverse." Serial sections of a breast exhibiting typical changes of degenerative hyperplasia, which was clinically associated with Paget's disease of the nipple, which had obviously blocked many ducts in the subareola were cut, and in no section was there to be seen dilatation except in those ducts which showed marked proliferation.

I have examined sections of such a clinical combination in two cases and failed to observe dilatation unassociated with proliferation. No evidence of carcinoma could be seen. However, such a finding does not prove the reverse theory and it would need much evidence of proliferation unassociated with blocking of the ducts to convince one of the constancy of such a cause. It is quite possible, however, for a marked proliferation to obliterate the lumen of the duct and provide its own mechanical factor. The origin of many cysts still remains doubtful nevertheless.

Far less obscurity surrounds the possible sequelæ to the formation of such cysts, for Cheatle[10] is convinced and illustrates very clearly by his sections that cysts of proved duct origin harbour cancer most frequently if not invariably. He indicates the correlation which I have described of laciform hyperplasia with duct carcinoma, and his statements are further enhanced by the striking resemblance of malignant papillomata of cyst origin to the carcinomata arising in involution cysts. I do not wish to suggest that all cystic breasts are prone to cancer; only that cancer appears to start in cysts and hence that cystic breasts are dangerous.

iii. *Adipose tissue* is invariably present and is one of those aids to diagnosis so frequently taken for granted as defying an efficient explanation. It must, however, be remembered that inactive breasts, such as obtain in childhood or at involution, tend to be both more scirrhous and more fatty than

the active and normal breasts. It is noticeable, however, in my series that the extent of fatty tissue is greater in the long-standing cases: yet the condition bears no resemblance to a local cellular degeneration. Nicholson[1] says: "I used to be taught as a student that the best way to distinguish between a fibroadenoma and a chronic mastitis is by the absence of adipose tissue in the former. I am not sure even yet that this is not the only way." I mention it more, however, for its interest as additional evidence in favour of the involution theory than for its diagnostic value. One would delight to find in it further indication of an environmental metabolic change such as is no doubt present during the involution period. Although irregular in distribution, it seldom varies in degree. Stewart and Forsyth[21] describe further changes in the occurrence of massive cholesterin deposits in long-standing cases.

Several important changes yet remain to be discussed. Apart from the hyperplasia of the dense supporting connective tissue, the fine pericanalicular stroma normally hard even to demonstrate has in 18 per cent. of cases become hyperplastic and œdematous—myxomatous if you like, reminding one of the identical changes occurring in the fibrous connective tissue surrounding the ducts in an intracanalicular fibroadenoma. I have three sections where œdematous polypi like those found in association with chronic inflammatory discharges of the nose, ear, vagina, etc., have completely obliterated the lumen of the duct. Occasionally hyaline changes are observed also. Changes seen are thus always degenerative or reactionary in nature: never does the fibrous connective tissue stroma assume sarcomatous characteristics.

Lastly, the very frequent (23 per cent.) association of collections of peridochal and periacinous lymphocytes, reticulo-endothelial plasma and giant cells indicate in no uncertain manner that in a good number of cases—those not fitting well to Kaufmann's resorption theory—a chronic irritation whether due to stasis or ascending infection, whether chemical, physical, or due to bacterial toxins, is a factor which cannot be ignored. Many such cells wander out into the corium and, becoming fibroblastic, render the stroma still more scirrhous. The matter has, however, been discussed.

INCIDENCE.—The disease occurs among married multiparæ or nulliparæ, unmarried women, men and occasionally adolescents of ages varying in my series from 14 to 76 years. Figs. 5, 6, which I reproduce by Mr. Turner's kind permission, indicate the degree of change in a girl of 14 upon whom a double mastectomy was performed in 1924. The only complaint in this case was of the enormous size attained after the first and only period, eight months previously, which was menorrhagic, the unfortunate girl having concealed her plight until no longer possible: histological examination of the breasts, which each weighed about 1680 grammes, shewed rather scirrhous involution changes—undoubtedly of the same ætiology, but of premature advent.

FIG. 5

The condition usually occurs, however, in women (95 per cent.) between the 40th and 50th years of life (56 per cent.) and more commonly in multiparæ. There is little doubt although this is not very well shown in this series, that cases of abnormal involution not infrequently follow a recent abortion, particularly if pregnancy has been estabilshed sufficiently long for hypertrophy of the breast to have occurred (46 per cent); all of which is additional evidence substantiating the involution theory. Most frequently the disease is bilateral and asymmetrical, but it may be confined to one breast: in either case the left breast appears to fare the worse in an appreciable majority of cases (60.4 per cent.). Further, although hyperplastic lesions are best seen in the periphery, cysts occur typically in the subareola (38 per cent.).

Symptoms and Signs.—Prominent symptoms bringing the patient to the Hospital were discomfort (7 per cent.), pain (3.8 per cent.), and a

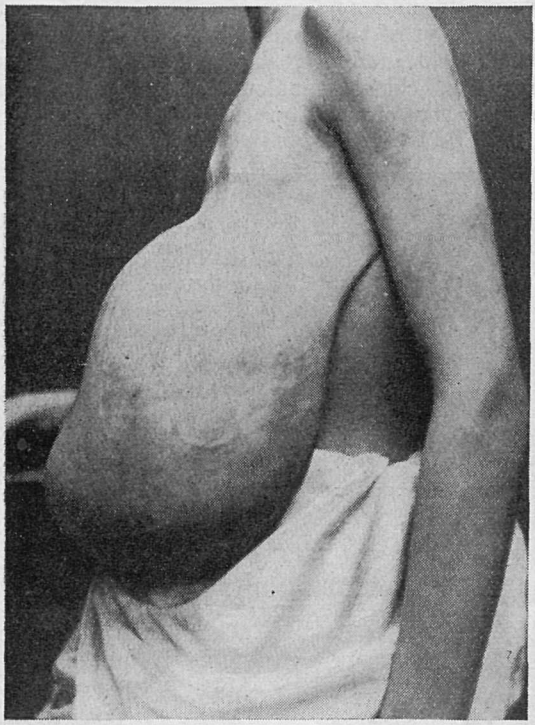


Fig. 6

discharge from the nipple (4.2 per cent.), but the *vis a tergo* causing them to seek advice was far more commonly a sign in the form of the accidental finding of a painless lump in the breast (82 per cent.). Discomfort and pain unless an immediate sequel to a blow tend to appear late. Much has been made, clinically, in the differential diagnosis between hyperplastic tumours or cysts and carcinoma of the breast, of the co-existence of pain or discomfort in the former. The relatively small number of cases with such a history indicates

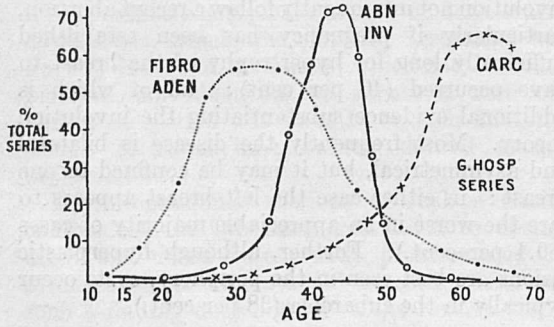


Fig. 7

clearly that its appearance is but significant and not in any way diagnostic. Anxiety and worry naturally focus the patient's attention upon the tumour and tend to magnify any physical discomfort experienced.

The latter is usually of the nature of a "dragging" or "drawing" sensation of almost continuous nature, due no doubt largely to the expansion of, and increase in weight within the fibrous capsule, for such discomfort is invariably accentuated by the advent of either menstruation or of pregnancy and tends to pass off with the passage of time and adaptation of supporting structures.

Pain experienced is frequently of a sharp stabbing nature, short lived and intermittent, coming on at any time and occasionally radiating into the base of the neck or down the inside of the arm. No less than 6 per cent. of patients came, however, complaining of a superficial "tingling," "pricking," or "itching" sensation again of irregular onset and duration, a symptom rare enough in other conditions of the breast to warrant some attention

Discharge, which is uncommon, must be considered indicative—especially if brown or sanious—of an intracystic papilloma, whether hyperplastic, adenomatous or carcinomatous Such papilliferous cysts are usually situated near the nipple (38 per cent.) and approach in size the normal limit of cystic dilatation in the breast—as Quervain[28] puts it, to the size of a goose's egg. Should hæmorrhage be marked and almost continuous, the condition allies itself with that of "bleeding breast" and the probability is all in favour of a carcinoma of duct type. The amount of discharge varies directly with the hyperæmia incidental to either menstruation or pregnancy, but is no true indication either of the nature or of the extent of the disease. *The vast majority of intracystic papillomata found at biopsy were entirely unsuspected clinically.*

Regarding the findings in the breast I should like to give you a dictum of Sir G. Lenthal Cheatle [29] "Any irregular hyperplasia gives rise to a nodularity palpable in any thinly covered breast." Breasts amply covered present not only a mechanical difficulty, but in addition give rise most frequently to those dense fatty, post-lactatory lobules lying enmeshed within the ligamenta suspensoria of Sir Astley Cooper and termed "false" nodules. Thus, true nodularity is an indication of, and true to, hyperplasia.

The difficulty, however, does not really lie here, but in the diagnosis of the nature of the hyperplasia. Is it adenomatous, involutionary or cystic; or is it carcinomatous? A rapid and correct diagnosis is essential.

The affected breast is usually slightly enlarged and not infrequently tender (28 per cent.) in parts, presenting either a single well-marked swelling near the nipple or a diffuse granular nodulation, generalised as in the "lobular" type or localised to a sector or even a smaller patch—the "lobar" type. In the majority of cases fortunately the two are combined, a finding which renders diagnosis considerably less difficult. The former is either an encapsuled fibroadenoma or a solitary cyst—usually too tense to fluctuate—and the latter is indicative of degenerative hyperplasia with multiple small cysts. Hyperplastic involution changes typically produce tumours and cysts of diffuse outline owing to a lack of margination on the part of the epithelial proliferation, and it is principally in the diagnosis of deeper tumours of diffuse outline that difficulties occur.

A sign of fundamental importance is the mobility of the tumour in relation to the rest of the breast tissue, a sign determined by imprisoning lightly the tumour between two fingers and making gentle shaking movements. If at all fixed, whether of diffuse nature or not, it is probably a carcinoma in spite of the absence of skin involvement, retraction of the nipple, or adherence to the pectoral fascia. Fibroadenomata may be rendered diffuse in outline by pericapsular involution changes, but only an inflammatory attack can temporarily deprive an innocent tumour of its mobility. Quervain[28] emphasises that if ever he has been in doubt over a tumour, biopsy has invariably revealed a malignant process.

Pressure with a flat hand is an aid to diagnosis in that cysts and localised hyperplastic areas tend to become less distinct thus, whereas hard carcinomatous foci are thus rendered firmer and better outlined. Paget's sign is of assistance in superficial tumours.

Further help, finally, in the case of a tumour of doubtful fixation may be obtained from the patient. A primary carcinoma seldom remains unfixed if of three or more months' history, so that presented with a tumour of doubtful fixation with a history extending under four months the probability is again in favour of a carcinoma. Of course numerous exceptions occur, prominent among them being the common finding of both hyperplastic involution and duct carcinoma in the same breast, the latter only too frequently concealed in its early and favourable stages within a distended hyperplastic-walled cyst. The remedy lies obviously in the radical nature of the treatment to be adopted. Ewing[35] has demonstrated a carcinoma of two millimetres only in size and by Mr. Rowland's and Professor Nicholson's kind permission I am able to show you here (Fig. 4) a remarkable case in which only a microscopical area showed signs of infiltration—signs unsuspected either clinically or surgically. On June 3rd, 1915, Mr. Rowlands removed under local anæsthesia a cyst containing blood from the right breast near the nipple partly filled by a papilloma which did not infiltrate. Prof. Nicholson examined the specimen and reported on the sections as follows: "An intracystic columnar-celled growth part of which is growing inside spaces. There is another part, however, which is surrounded by a very sclerotic fibrous tissue. This shows quite definite, although slight, signs of infiltration: I do not like the look of it." Prof. Nicholson advised the removal of the breast, but not necessarily of the axillary glands, advice which was entirely endorsed after full investigations by Sir Alfred Pearce-Gould and Mr. Shattock with the exception that Sir Alfred Pearce-Gould, in consultation with Mr. Rowlands, advised the removal of the axillary glands as well as the breast, but not the pectoral muscles.

Mr. Rowlands operated on June 15th, 1915, in Bright Ward, removing the entire breast and axillary glands under a general anæsthetic administered by Sir. F. Shipway, and sections taken of different parts of the breast and of the glands were examined by Prof. Nicholson, but no sign of carcinoma was found. There has been no sign of recurrence since—now nearly 15 years later.

The importance of this case is that it was only during routine histological examination of pericystic tissues that Dr. Nicholson discovered a malignant element—a remarkably small element—since excision of the remainder of the gland failed to disclose further carcinoma. It serves to indicate how very easily a malignant focus may be missed entirely in an involution breast such as this. Radical treatment in cases where any doubt exists cannot be too strongly advocated.

Changes in the axillary glands afford but little help, for they may be enlarged and tender in almost any condition affecting the breast. I am not concerned here with obviously malignant tumours accompanied by enlargement and fixation of the axillary glands, but it sometimes happens that dissemination affords the sign of very suspicious glands even above the clavicle when the mammary lesion has either failed to infiltrate locally or has become cirrhotic and self-obliterated. It is of interest to note that there occur in my series three cases in which an axillary tumour entirely separate from the axillary tail of the breast has proved on biopsy to be an accessory portion of normal breast tissue enclosed within a fibrous capsule.

Treatment.—There is no doubt that some cases of involution with hyperplasia and even multiple cyst formation are cured spontaneously, and it is largely on this account that one may, especially in a woman of under 40 suffering from a definitely non-malignant condition, apply non-surgical measures. A belladonna plaster or a Scott's dressing, together with a bandage of supporting nature, will invariably allay pain and discomfort while potassium iodide gr.x t.d.s. supplemented by half-grain doses of thyroid extract b.d. would appear to encourage a normal involution process. Mr. R. Davies-Colley believes a very large percentage of early cases to subside by the use of a firm pressure bandage, allowing a time limit of six weeks. Troublesome cysts may sometimes be drained by means of a Klapp's suction-bell or a breast-pump.

Such a line of treatment, however, can only expect a very discouraging percentage of good results, and in all cases showing no improvement under such conditions within six weeks, the correct treatment is undoubtedly amputation. The axillary glands may be left with assurance of a satisfactory prognosis unless there is some special indication for their removal, and the pectoral muscles, of course, need no surgical interference. Above all do I wish to stress that the local excision of a cyst, or of an adenoma, around which there is any degree of diffusity suggestive of hyperplastic involution changes, is to be condemed as strongly as would be the removal of a primary growth in the presence of metastatic foci. The involvement of either axillary glands or of pectoral fascia is a strong contra-indication to the adoption of any surgical measures conducted in the hope of a satisfactory prognosis. An elliptical incision with removal of the enclosed skin and nipple is the most satisfactory, but if it be desired to preserve the latter, the breast may be amputated through an enlarged Galliard Thomas incision with reflection of a large flap towards the manubrium sterni. Such a flap unfortunately tends to become gangrenous and slough.

Should there be contra-indications to the conduction of surgical treatment there yet remain two lines of action.

Rosenberg[30], Polano[31] and others have advocated the induction of an artificial menopause by X-ray sterilisation with the object of achieving a rapid degenerative fibrosis of the mammary gland: but this in essence is the process which appears to bear such a strong ætiological relationship with hyperplasia of the type under discussion, and hence is a measure to be undertaken with much forethought, if at all.

More accurately-graded destruction, however, by direct or cross fire X-ray treatment appears to have much in its favour. It may be used:—

a. To abort malignant changes;
b. To cure hyperplastic involution changes;
c. To render a borderline case operable.

J. H. D. Webster[32] has recently reported among several hundred cases of carcinoma 60 cases of abnormal involution treated by deep Rontgen rays. Four medium or high voltage cross firings were given according to the degree and extent of change present, and over 90 per cent. reported an entirely satisfactory abortion of hyperplastic changes without recurrence within five years. One case only became carcinomatous 12 months after a medium dose, a sequel which might well have been averted by the use of the high voltage treatment.

Finally, should delay be desirable for other reasons, or a very early carcinoma be suspected, a short course of deep therapy may be given, operation to follow in three or four weeks. Gye[33] has shown that incision is one of the surest means of disseminating carcinomatous cells and such a course of therapy, it is assumed, will damp the ardour of mitosis of such malignant cells sufficiently to render them innocuous. Indeed, Lee and Herendeen[34] on such grounds verge towards such a procedure in all marked cases of abnormal involution.

However, let me not detract by such alternative methods of treatment from the infallible excellence of radical surgical measures. Carter Braine and Massie[37] in collecting 722 cases of carcinoma report 80 per cent. three year survival rate without recurrence provided that operation follows clinical or biopsy diagnosis immediately, thus confirming Bloodgood's[19] statistics. If there is an interval between exploratory and radical operations the survival rate is reduced to 13 per cent. Amputation in the absence of other contra-indications is by far the most satisfactory procedure, and should be adhered to rigorously.

Conclusions.

1. Hyperplasia, heteroplasia and tumour formation are so closely allied as to defy in many instances definite differentiation: no cell rest theory is necessary to explain tumour formation, cells concerned being perfectly physiological cells.

2. Chronic mastitis is better called abnormal involution of the breast: it is probably a very active involution with fibrosis and secondary hyperplasia.

3. The hyperplasia is of progressive nature, it being possible to trace changes from the hetero-

plastic form to definite carcinoma, almost invariably of duct origin. Hence certain early changes warrant radical surgical treatment.

4. Clinically the difficulty lies in the differentiation of localised, painless, diffuse "lobar mastitis" from carcinoma. Fixity is the most satisfactory criterion.

5. Amputation is indicated in all cases failing to respond to non-surgical methods within six weeks. Good results, however, may follow short courses of cross-fire deep therapy.

May I, in addition to acknowledgments already made, express my sincere thanks to Mr. R. Davies-Colley and Professor Donaldson for many helpful suggestions, and to Professor Nicholson for practical assistance and kindly suggestion of inestimable value.

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Sport

Boxing

ON Tuesday, April 1st, the Second Boxing Gala between Guy's Hospital and the Film Artists' Guild was held at the Stadium Club. This event, inaugurated last year, was again an outstanding success, and much credit is due to the committee for providing a most enjoyable programme. Last year the result was a draw, with eight wins to each team. This year, however, Alf. Hewitt produced a formidable side, and Guy's were successful in winning eight contests and the Film Artists' Guild three. The most noticeable feature of the boxing of the Guy's men was the efficient way in which they used the straight left. This no doubt is largely due to the able coaching of Alf. Hewitt. W. P. Stamm and C. G. Palmer both won their fights through the efficient use of this punch, the former punishing his man severely, and the fight being stopped in the second round.

G. A. Burrows, a welter carrying a heavy punch in both hands, outclassed his opponent in the first round and won on a technical knock-out.

Singer, also a welter, and a most aggressive boxer, met in G. Spence a man with an awkward defensive style which made it difficult for Singer to get home with his left. Both were boxers of proved ability, and the fight was interesting from start to finish, Singer eventually winning with a good margin of points.

Town, R. A. Johnson and Dale, by good performances added points to the Hospital's score. The heavy-weight contest was a disappointment, inasmuch as the fight was awarded to Stone on an unfortunate foul. Stone was boxing well, when in the third round he received a blow similar to that which floored our champion in America. There was general regret from all sides at this unfortunate incident. In this case, however, there was no pin-pricking demonstration of the amount of damage to the sciatic nerve.

For the Film Artists' Guild Caplan and J. Johnson, two skilful and accomplished boxers, were too good for their opponents and won all the way. Christie, a light-heavy, the other successful Film Artist won a fight marked by hard hitting on both sides.

The amateur contests being finished, there followed three interesting exhibitions. The first was between F. H. Burden, ex-English Public Schools Champion and J. Crier of the Belsize Club. This was an attractive display of scientific boxing,

and was much appreciated by the audience. There next followed a bout between Bombadier Billy Wells, ex-heavy-weight champion of England, and Lt.-Col. H. F. S. Huntington, ex-heavy-weight champion of the Imperial Services.

The next event was one which appeared to be extremely popular with the male members of the audience—"Mr. Dyer's Young Ladies" gave us an interesting demonstration of how the modern girl may keep fit 'midst the rush of her engagements. The climax of this event was reached when Mr. Dyer requested his young ladies to "Turn over, please."

A most pleasant evening was concluded by the presentation of Cups to the winners by Mr. F. J. Steward.

Sailing Club

THE Guy's Hospital Club is affiliated to the United Hospitals Sailing Cub who own seven fourteen-foot dinghies and a "Half Decker," at Burnham-on-Crouch. The season opens at Easter; races are frequently arranged by the Burnham Clubs. There are four Inter-Hospital Challenge Cups and a Cup for single-handed sailing by Guy's men which was presented by Mrs. Ogilvie.

New members will be welcomed and they should give in their names to the Hon. Sec. Novices have an excellent opportunity of gaining experience.

There can be no more pleasant change from the sultry Borough atmosphere than a week-end spent in cruising and camping on the Crouch.

D. ERSKINE,
Hon. Sec., G.H.S.C.

Hospital Information, etc.

Pass List

UNIVERSITY OF LONDON.

SECOND EXAMINATION FOR MEDICAL DEGREES.

March, 1930.

PART II.

H. Bloom	J. Grocott
K. R. D. Coles	A. E. Locke
G. A. Dingemans	B. McArdle
C. J. Evans	A. G. Potts
G. J. Evans	B. W. Smith
E. D. Falconer	G. H. Taylor

SOCIETY OF APOTHECARIES

April, 1930

Anatomy

S. Adams — P. E. Cresswell

Physiology

P. E. Cresswell — E. E. Evans

H. B. Thornton

Papers by Guy's Men

R. Cutler. Problems in orthodontics, *Brit. Jour. Dent. Science*, 1930, 116.

St. G. B. D. Gray. The injection treatment of hydrocele, *B.M.J.*, 1930, i, 649.

J. A. Glover. Milroy lectures,III, Chronic arthritis, *Lancet*, 1930, i, 733.

R. C. Lillicrap. Fusion of teeth. *Brit. Dent. Jour.* 1930, 356.

D. Reynolds. Forenote on an alternative method for administration of quinine in the treatment of malaria, *Jour. R.A.M.C.*, 1930, 296.

Appointments

A. Alcock, M.B., B.S., Medical referee under Workmen's Compensation Act (Circuit 53).

G. S. Simpson, F.R.C.S., Professor of Surgery, Sheffield University.

Change of Address

T. B. Layton, M.S., F.R.C.S., 19, Queen Anne Street, W. 1. *Langham* 2660; 76, Kingsmead Road, S.W.2. *Streatham* 4322.

Guy's Hospital Dental School.

APPLICATIONS are invited for the post of Demonstrator in the Dental Prosthetic Department. Attendance is required on Mondays, Wednesdays and Thursdays, from 9.30 a.m. to 1 p.m. Duties to commence on Wednesday, April 30th, Salary at the rate of £120 per annum. Applications to be lodged with the Dean, Guy's Hospital Dental School, not later than Wednesday, April 23rd.

Births

FRIPP—On March 20th, 1930, at 6, Trinity Street, Colchester, to Verona, wife of T. M. Fripp, M.R.C.S., L.R.C.P.—a daughter.

HYSLOP—On March 9th, 1930, at Astley House Nursing Home, Surbiton, to Lulu, wife of A. L. Hyslop, L.D.S.—a son.

RICHARDS—To Dr. and Mrs. Harry Richards, 21, Grange Road, Newnham, Cambridge,on April 12th—a son.

Marriage

LEWIS-PHILIPPS—BENCE. The marriage took place at St. James's Church, Swansea, on March 27th, 1930, between Hugh Lewis-Philipps, M.R.C.S., L.R.C.P., of Clyngwynne, Whitland, Carmarthenshire, and Alice Lilian Bence, of Tonyrefail, Glamorganshire.

EDS. {J. B. B. / P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *3rd May* 1930 — *Number* 1090

PASSIM

AS is rapidly gathered from a glance through the advertisement pages, we have in this number the annual parade of medical books for the enticement of the student who is expected to be in need of them. The advertisements are bald, they are devoid of the arresting qualities accorded to the modern novel, and nowhere will be found the cheap popular edition for the small purse. The number of new books, however, steadily increases, and we must presume that medical men read more each year; we would advise caution, however, in the purchase of these expensive necessities that are to become one's own property; the art of producing, on the surface, an attractive book is too easy.

Books appeal in different ways to different people. We know some who seldom look beyond the cover, and prefer to see the backs, often of other people's volumes, ranged undisturbed upon their shelves; others, more rare, do not mind the appearance or condition of the book, but are content with the quality of the subject matter,—we admire them. For most, including ourselves, the substance loses something of its keenest interest if the print is not bold and well set out, the paper of good quality, the binding such as to appeal to the eye as the book stands on the shelf. All these sauces to one's bookish appetite are receiving more and more attention from the medical publisher, so much so, that every new book appeals until on close scrutiny we discover it is still the author that matters; he, too, in most instances, of recent years has paid strict attention to the form of his writing, so that the average medical book, monograph or text-book is more than ever a pleasure to read.

Everyone should have well-filled bookshelves, but it is a sorry sight to see the medical student who has made his books the end of learning rather than an aid.

THE death of the Poet Laureate arouses in the minds of the British Nation as a whole merely a reminiscent feeling of respect for a great man, whose reputation has earned for English Literature the high position it has traditionally maintained. To those of us of the medical profession it means something more, for it leads us to reflect that medicine does now, as she always has done, contribute her share to the Muses. It has been said that of all the honours conferred on Dr. Bridges—and they included the Order of Merit—the one of which he was most proud was his election to a Fellowship of the Royal College of Physicians. It was not until he reached the age of 37 that he retired from practice, to devote himself entirely to the development of his artistic tendencies, and we can only presume that he owed to his scientific training that logic and attention to detail which so clearly characterises his work. Keats, though he left Guy's and the practice of medicine at a considerably younger age that Bridges left St. Bartholomew's, provides yet another example of the fact that science is not necessarily divorced from the Arts, and we can only wonder that so many theses on scientific matters find in their subject sufficient excuse for the adoption of such a deplorable style. Admittedly scientific "English" has reached such a pitch of inexcusable bastardy—take for instance the word "intratracheal"—a diabolical alliteration rendered only possible by the illegitimate liason of two dead languages—that the purest has been strangled from our midst: granted that the Anglo-Saxon ideals of William Morris are as unsuitable to the provocation of a scientific train of thought as the English of Chaucer would be to the description of a modern Kentish holiday: but there is a mean in all things, and whereas we do not advocate the monosyllabic staccato of an Anita Loos for the propagation of a ponderous scientific discovery, we would beg to be allowed humbly to join with Dr. Bridges, who, as one of the founders of the Society for Pure English, deplored the superlatinisation of an already cosmopolitan English language.

THE adoption of the "Free Period" into the Hospital curriculum has to a great extent relieved the bewildered student from his frenzied efforts to emulate the quick-change variety stage artist. We well remember giving our earnest consideration to the solution of the problem of appearing to attend—say, surgical outpatients, a pathology lecture, a Fever Hospital and a V.D. demonstration simultaneously. It is, therefore, with joy that we learn that permission has been obtained from the Ministry of Health to conduct the course of instruction in Vaccination within the Hospital precincts. Not only has the mountain come to Mahomet, but in doing so a further concession has been granted, namely, that no special fee for the course will be charged.

THE following House Appointments have been made :—

House Physicians—
To Mr. Hurst—Mr. C. F. Cosin.
To Dr. Mutch—Mr. R. S. B. Pearson.

House-Surgeons—
To Mr. Steward—Mr. S. J. Wheeler.
To Mr. Rowlands—Mr. P. M. F. Bishop.

Obstetric Residents—
To Mr. Chapple—Mr. J. B. Blaikley.
To Messrs. McNair and Cook—Mr. G. J. Clarke.

House Surgeon in the Ear, Nose and Throat Department—
Mr. T. G. Robinson.

House Physician in the Department for Skin and Nervous Diseases—
Mr. H. Richards.

House-Physician in the Department for Children—
Mr. W. J. Cotton.

Out-Patient Officers—
Mr. H. G. McGregor.
Mr. E. R. R. Mellon.
Mr. S. Shone.
Mr. D. B. Smallshaw.

Assistant House-Surgeons—
To Mr. Hughes—Mr. W. J. Ferguson.
To Mr. Davies-Colley—Mr. R. Stewart-Harrison.
To Mr. Bromley—Mr. H. J. Croot.
To Mr. Slesinger—Mr. J. M. Lees.
To Mr. Ogilvie—Mr. S. J. Hollis.

The Surgical Treatment of Obstructive Jaundice

A Clinical Lecture delivered at Guy's Hospital, by R. P. Rowlands, Esq., O.B.E., M.S.

GENTLEMEN,—As the late Sir William Osler truly said, "jaundice, like albuminuria, is a symptom and not a disease, and is met with in a variety of conditions."

The diagnosis of the cause is often difficult, but no effort should be spared to ascertain if this is or is not an obstruction of the common bile-duct because this can be either removed or overcome by an operation.

In this clinical lecture I am bringing before you the notes of three typical instances of this sort. In one, the obstruction was due to a calculus in the common bile-duct, causing jaundice of eight weeks' duration. The patient, who was a feeble old man, died after removal of the stone.

In the second, the obstruction was due to an irremovable carcinoma of the common bile-duct, but a short circuit abolished the jaundice, greatly improved the health, and prolonged life for over a year.

In the third, chronic pancreatitis had obstructed the common bile-duct, and here a short circuit cured the patient who remained well for many years.

Jaundice, due to obstruction of the common bile-duct, is always amenable to operation because even if the cause is irremovable, the dilated gall-bladder or bile-duct can be either shortcircuited to the stomach or drained to the skin. At the best, the patient may be completely cured, at the least, he will be relieved of the jaundice with its intolerable itching, anorexia, wasting and mental depression, and his life prolonged and made far more endurable. Therefore, I strongly urge that every patient suffering from obstructive jaundice should be offered the great benefits which an operation can give him. The operation of cholecystgastrostomy performedi n time, and with due precautions, carries a small mortality at the present time[1].

Hæmolytic jaundice, also, can be cured by operation at a very small risk[2]. Here splenectomy gives the most dramatic and rapid results. But catarrhal jaundice and many forms of toxic and infective jaundice do not call for operative treatment. Under this heading, poisoning by toluylendiamin, phosphorus, arsenic and snake venom, acute yellow atrophy and Weil's disease may be mentioned. It is important for the surgeon to bear these in mind so that he may not mistake them

GUY'S HOSPITAL MEDICAL SCHOOL.

TIME TABLE. SUMMER TERM, 1930.

SUBJECTS FOR FINAL EXAMINATION. MEDICAL.

Subject	Lecturer	Days and Times	Place	First Class or Lecture
Bacteriology	Professor Eyre	Lectures. Tues. Weds. and Thursdays at 12.15 p.m. Practical. Mons. Tues. Weds. Thurs. Fridays and Saturdays at 9.15 a.m.	Pathol'cal Theatre Path'cal Class Room	Wednesday, April 23rd Wednesday, April 23rd
Psychological Medicine	Dr. Gillespie	Lectures. Fridays at 9.0 a.m. Demonstrations. Wednesdays at 3.15 p.m.	Physio'cal Theatre Bexley Mental Hospital	Friday, May 2nd Wednesday, May 7th
Forensic Medicine	Dr. Ryffel	Fridays at 4.30 p.m.	Class Room 3	Friday, May 2nd
Operative Surgery	Mr. Hughes	Mondays and Fridays at 12 noon	Op. Surg. Class Rm.	Friday, May 23rd.
Applied Anatomy	Professor Johnston	Wednesdays at 12 noon	Demonstration Theatre	Wednesday, April 30th.

ORGANIC CHEMISTRY, ANATOMY AND PHYSIOLOGY.

Subject	Days and Times	Place	First Class or Lecture
Organic Chemistry (2nd M.B. Part I.)	Lectures. Weds. & Fridays 9.30 a.m. Practical. Mondays 2-5 p.m. Thursdays 10-1 p.m.	Chemistry Theatre Chemistry Laboratory	Wednesday, April 30th. Thursday, May 1st.
Anatomy	Elementary Lectures. Mons. 9.30 a.m. Weds. 11 a.m. Practical Anatomy. Daily from 9.30 a.m. to 5 p.m. Revision Classes. To be announced later Normal Histology. Tuesdays at 2 p.m.	Anatomical Theatre Dissecting Room Demonstration Theatre Histology Laboratory	Wednesday, April 30th. Tuesday, April 29th To be announced later Tuesday, May 6th
Physiology	Chemical Physiology. Tuesdays 2-4 p.m. Experimental Phys'logy. Weds. 11-1 p.m. Physiological Histology. Fridays 11-1 p.m } Revision for M.B. Candidates Clinical Physiology (All Students). Thurs. 12-1 p.m.	Chemical Physiological Laboratory Experimental Physiological Laboratory Experimental Physiological Laboratory Clinical Theatre	Tuesday, May 6th Wednesday, May 7th Friday, May 2nd Thursday, May 1st
	Practical Revision Classes for candidates for Conjoint Examination Tutorial Classes, Elementary. (Junior Medical Students.) Advanced. (All Senior Medical Students.)	Days and times of classes and dates of commencement will be announced later	

CHEMISTRY, PHYSICS AND BIOLOGY.

Course	Subject	Lectures	Place	Practical Classes	Place
Pre-Medical Conjoint	Inorganic Chemistry Organic Chemistry	Tues. & Thurs. 9.30 a.m. First Lecture, Thursday, May 1st Thurs. & Fri. 2 p.m. First Lecture, Thurs., May 1st	Chemistry Laboratory Chemistry Theatre	Thurs. 3-5 p.m. & Fri. 10-1 p.m., First Class, Thurs., May 1st When no Lecture Practical Class 2-5 p.m., on Thurs.	Chemistry Laboratory
	Physics	Light & Sound. Tues. & Thurs. at 10.50 a.m. Heat. Tues. at 12 noon. First Lecture, Thurs., May 1st	Class Room IV.	Mons. 10-1 p.m. and 2-5 p.m. First Class, Mon. May 5th.	Physics Laboratory
	Biology	Weds. & Fridays, 9.30 a.m., First Lecture, Wednesday, April 30th	Biology Laboratory	Tues. & Fridays 2 p.m. First Class, Fri. May 2nd	Biology Laboratory
M.B. London	Inorganic Chemistry	Tues. & Thurs. 9.30 a.m. First Lecture, Thurs., May 1st	Chemistry Theatre	Mons. 10-1 p.m., Tues. 2-5 p.m. First Class, Mon., May 5th	Chemistry Laboratory
	Physics	Light & Sound. Tues. & Thurs. 10.50 a.m. Heat. Tues. at 12 noon. First Lecture, Thurs., May 1st	Class Room IV.	Thurs. & Fridays 2-5 p.m. First Class, Thurs. May 1st	Physics Laboratory
	Biology	Weds. & Fridays, at 9.30 a.m. Thurs. at 12 noon, First Lecture, Wed., April 30th	Anatomical Theatre	Weds. & Fridays at 10.30 a.m. Sats. 11 a.m. First Class, Wed., April 30th	Biology Laboratory

GUY'S HOSPITAL DENTAL SCHOOL

TIME TABLE—SUMMER TERM, 1930.

Subject	Lectures	Place	Practical	Place
INORGANIC CHEMISTRY	Tuesdays and Thursdays at 9.30 a.m., commencing on Thursday, May 1st	Chemistry Laboratory	Thursdays at 3 p.m. and Fridays 10 a.m., commencing on Thursday, May 1st	Chemistry Laboratory
ORGANIC CHEMISTRY	Thursdays and Fridays at 2 p.m. commencing on Thursday, May 1st	Chemistry Theatre		
PHYSICS	Tuesdays and Thursdays at 10.50 a.m., and Tuesdays at 12 noon, commencing on Thursday, May 1st	Class Room IV	Mondays 10–1 p.m. and 2–5 p.m., commencing on Monday, May 5th	Physics Laboratory
BIOLOGY	Wednesdays and Fridays at 9.30 a.m., commencing on Wednesday, April 30th	Biology Laboratory	Tuesdays and Fridays at 2 p.m., commencing on Friday, May 2nd	Biology Laboratory
DENTAL METALLURGY ..	Mondays, Wednesdays and Fridays at 12 noon, commencing on Wednesday, April 30th	Chemistry Theatre	Thursdays at 2 p.m., commencing on Thursday May 8th	Metallurgical Laboratory
DENTAL PROSTHETICS ..	Mondays at 4 p.m., commencing May 5th	Anatomical Theatre	Fridays at 1.45 p.m., commencing on May 9th	Dental Laboratory
ANATOMY	*Elementary Lectures*— Mondays 9.30 a.m. and Wednesdays 11 a.m., commencing Wednesday, April 30th *Demonstrations*— Thursdays at 9.30 a.m., commencing May 8th	Anatomical Theatre Demonstration Theatre	Daily 9.30 a.m. to 5 p.m. Names to be entered in Dissecting Room on Tuesday, April 29th at 10 a.m.	Dissecting Room
PHYSIOLOGY	Thursdays 10.30 a.m. to 12 noon commencing May 8th	Physiological Theatre	Thursdays at 11 a.m., commencing May 8th	Experimental Laboratory
DENTAL ANATOMY ..	Fridays at 12.15 p.m., commencing May 2nd	Physiological Theatre		
DENTAL HISTOLOGY	Mondays at 2 p.m., commencing May 5th	Physiological Theatre	Mondays at 2.30 p.m., commencing on May 5th	Histology Laboratory
DENTAL DISEASES OF CHILDREN ..	Tuesdays at 4 p.m., commencing May 6th	Anatomical Theatre		
OPERATIVE DENTAL SURGERY	Thursdays at 4 p.m., commencing May 1st	Anatomical Theatre		
DENTAL MATERIA MEDICA	Thursdays at 2.15 p.m., commencing May 1st	Physiological Theatre		
GENERAL BACTERIOLOGY ..	Tuesdays, Wednesdays and Thursdays at 12.15 p.m., commencing Wednesday, April 23rd	Pathological Theatre		
DENTAL BACTERIOLOGY ..			Mondays at 4 p.m., commencing on Monday, April 28th. A second day will be arranged later	Pathological Class Room
MEDICINE DEMONSTRATIONS ..	Tuesdays at 4 p.m. commencing on April 29th	Class Room III		

for obstructive jaundice and submit patients to useless operations.

The same remarks apply to jaundice due to cirrhosis and new growths of the liver.

The causes of obstructive jaundice may be found: (1) Inside, (2) in the wall, (3) outside, the common bile-duct, or (rarely) the common hepatic duct.

(1) *Inside.*—Stone, bloodclot, hydatid, slough, liver fluke, round worm. Of these, stone is infinitely the commonest, but I have removed organised[3] bloodclot, hydatid, and a slough, which were obstructing the common bile-duct. The slough had passed through a dilated cystic duct after cholecystostomy for acute cholecystitis; it contained a catgut suture.

(2) *In the Wall.*—Stricture, following operation or injury, kinking of the duct, papilloma. Carcinoma, in common hepatic duct, in common bile-duct, at duodenal papilla.

(3) *Outside.*—Enlarged glands, especially malignant glands, carcinoma of the pylorus, any large abdominal tumour, aneurism, pancreatic cyst, hydatid cyst, renal growth, such as hypernephroma. Any of these may obstruct one of the main bile-ducts.

SYMPTOMS OF OBSTRUCTIVE JAUNDICE.

1. *Icterus.* Frequently, other discolourations of the skin are mistaken for jaundice, in which not only the skin, but the eyes and the secretions, such as the urine and sweat, are bile-stained.

2. *Itching* of the skin is one of the most troublesome and intractable symptoms of jaundice, giving the patient no rest, and making him scratch the skin until it bleeds.

3. *Clay-coloured stools.* With complete biliary obstruction, the fæces are very pale, and contain undigested food, but no bile pigment.

4. *Pulse.* A slow pulse is characteristic of jaundice, but when cholangitis supervenes, it may become quick and irregular.

4. *Hæmorrhage.* Bleeding is a constant danger of chronic jaundice, and may occur from the mucous membranes, or from the wound after operation. This is chiefly due to a deficiency of calcium in the blood, with anæmia.

6. *Cerebral Symptoms.* Mental depression is usual in jaundice, and sometimes may be extreme.

7. *Hepatic Insufficiency.* Failure of the liver functions is a frequent cause of death after long continued jaundice. The bile becomes thin, pale and profuse, and the patient becomes restless, irritable, weak and rapidly thinner.

8. *Uræmia.* Some subjects of chronic jaundice become uræmic and die comatose.

DIAGNOSIS.

Other forms of jaundice have been mistaken for obstructive jaundice.

Catarrhal jaundice is slight, usually of short duration and almost entirely free of pain; but occasionally the jaundice may last for many weeks and give rise to difficulties in diagnosis.

The jaundice of cirrhosis of the liver is especially liable to be mistaken for obstructive jaundice because of the secrecy of chronic alcoholism and the frequent denial of all history of it. The occasional association of severe pain with hypertrophic cirrhosis and perihepatitis adds to the difficulties. But the characteristic facies, and the feel of the large irregular liver, without enlargement of the gall-bladder, help in the diagnosis.

Primary, or secondary malignant disease of the liver with jaundice has been mistaken for obstructive jaundice, but the irregular or nodular enlargement of the liver, the failure to feel a distended gall-bladder, and perhaps the finding of a primary growth should prevent this mistake.

As a rule, hæmolytic jaundice is too slight to be mistaken for ordinary obstructive jaundice, and is associated with enlargement of the spleen; but in about half the cases of acquired hæmolytic jaundice, gall-stones are present and occasionally cause true obstructive jaundice.

Usually, the difficulty of diagnosis is between the different varieties of obstructive jaundice, especially those due to (1) cholelithiasis, (2) carcinoma of the pancreas, and (3) chronic pancreatitis.

Fortunately, an operation does good in all these, but as the prognosis differs very much it is important to arrive at an accurate diagnosis whenever possible.

Calculous obstruction differs from all others in its sudden onset, with severe pain or intolerable nausea, soon followed by jaundice. It is the association of typical colic with jaundice that is so very characteristic of impaction of a stone in the common bile duct.

Any intermission, or even remission of the jaundice is also in favour of calculus. In over 80 per cent. of the cases of calculous obstruction, the gall-bladder is not palpable, because it is so fibrotic as a result of chronic disease as to be incapable of sufficient expansion. Remittent or intermittent fever, shivering and sweating, are all more characteristic of the calculous variety of obstruction.

The jaundice sometimes secondary to chronic pancreatitis is rarely deep, or associated with much pain, but it frequently gives Cammidge's Reaction in the urine and the appearance of undigested meat fibres as well as fat in the stools.

Jaundice due to carcinoma of the head of the pancreas or of the common bile-duct is characterised

by its gradual onset, continuous increase and great depth, often ending in green or black jaundice. It may be associated with severe pain, but this is rarely typical biliary colic, and it follows, rather than precedes the jaundice. It is rarely associated with signs of cholangitis.

Marked and progressive wasting, without fever, is almost characteristic of jaundice due to malignant disease.

INDICATIONS FOR OPERATION.

The main indication for operation is the diagnosis of calculus as the cause of the jaundice ; even a fair chance of finding a stone, justifies an exploration. Here it may be remarked that biliary colic is absent, and entirely replaced by nausea in some cases of stone in the common bile-duct. Under these circumstances, operation is unfortunately delayed.

Enlargement of the gall-bladder is a helpful indication for operation, because it shows that the jaundice is obstructive and particularly that it can be overcome by cholecystgastrostomy. If the gall-bladder is not enlarged, the obstruction may be in the common hepatic duct, which makes it very difficult to relieve the jaundice. But occasionally a primary carcinoma of the duct can be removed, and the duct either reconstituted or the bile drained into the duodenum or to the skin.

Various operations, which can either cure or relieve obstructive jaundice may now be discussed.

Cholecystostomy is a safe and easy way of relieving jaundice when the gall-bladder is enlarged, but a chronic biliary fistula is troublesome and annoying to the patient. It may be adopted, however, in very bad late cases, as a temporary measure. In some instances of chronic pancreatitis the drainage may be curative, the fistula gradually closing as the inflammation of the pancreas and biliary tract subsides. But should infection lurk in the walls of the gall-bladder, inflammation of it and of the pancreas may recur later on and call for another operation. As a rule, *cholecystgastrostomy* is the best operation for jaundice due to chronic pancreatitis or irremovable malignant disease in or near the common bile duct. In fact, when any cause of obstructive jaundice cannot be safely removed, a short circuiting operation is indicated, and of these cholecystgastrostomy is by far the easiest, safest and best. It is much better than *cholecystjejunostomy*, which was often followed by kinking and vomiting. It is usually much easier than *cholecystduodenostomy*, which has, in some cases, been followed by duodenal fistula and occasionally by duodenal stenosis. Joining the gall-bladder to the colon, although an operation often safely performed by nature when a stone ulcerates through into the bowel, does not compare favourably with cholecystgastrostomy, either from the physiological or surgical point of view.

Choledochotomy. Jaundice due to calculous obstruction is best treated by removing the stones by choledochotomy. It is generally safe and wise to wait a while for a remission or intermission of the jaundice. But sometimes no remission occurs, and it is necessary to operate without undue delay and to take every precaution against hæmorrhage.

Cholecystectomy is sometimes necessary when the gall-bladder is infected in cases of chronic pancreatitis or cholelithiasis, but if the jaundice is of some weeks' duration it is wise to take precautions against hæmorrhage. The intravenous or intramuscular injection of calcium chloride, or the use of a reliable hæmostatic serum generally suffices, but blood transfusion is sometimes necessary.

When the gall-bladder has been removed, or has shrivelled up, either *choledochostomy* or *choledochoenterostomy* has to be performed. The choice between these has to be made in those difficult cases of occlusion of the bile-ducts, following operation. If possible, some form of reconstruction of the ducts should be done ; or the dilated upper part of the bile-duct may be joined to the duodenum after the methods of Mayo or Walton. Failing these methods, the duct may be drained and the resulting biliary cutaneous fistula later joined to the stomach or duodenum after the method of Walters. When all these operations have proved impossible, an opening into the liver has been made with the cautery and joined to the bowel with success in a few cases.

In conclusion, it may be emphasised that an operation should always be advised with confidence in all cases of true obstructive jaundice. In many cases, a cure may be obtained by removing the cause, such as a stone, perhaps unsuspected, in the common bile-duct. Failing this, a short circuit may cure a chronic pancreatitis. Even when the obstruction of the common bile-duct is due to malignant disease, the jaundice and intolerable itching can be overcome and life prolonged in comparative comfort for many months or years.

Radium introduced into the pancreas may delay or even prevent the fatal end in some cases. There is always a chance that the diagnosis of carcinoma of the head of the pancreas may be wrong, and that the swelling and hardness may be due to chronic pancreatitis, in which the short-circuit may be expected to cure the patient. In my experience, about one third of the cases of swelling of the head of the pancreas, causing jaundice, are inflammatory, and the remainder are

malignant. My house surgeon[4] once published six consecutive cases under my care at Guy's Hospital. Three of the patients completely recovered and three died of carcinoma within a year of the short circuiting operation which had afforded considerable relief.

CASE 1.

Jaundice, due to Calculus impacted in the Common Bile-duct. Choledochotomy. Cholecystostomy. Death.

Mr. N., aged 63, sent to me by his medical attendant with the following letter :—

" I shall be pleased if you will kindly see my patient, and advise him what is best to be done. He is suffering from jaundice, duration about eight weeks, which came on quite suddenly, and which I took to be catarrhal ; but I am afraid there is some obstruction in the bile-ducts or malignant disease causing it. He has been a great sufferer for many years (nearly all his life) from recurrent diarrhœa, and for the last three or four years he has been passing about 60 to 70 ounces of urine daily (specific gravity 1,030, very acid, sugar present, no albumen), and he has been losing weight slowly and steadily."

He was a thin, feeble old man, who said that he had suffered very severe pain about three days before the onset of jaundice, and also several times since. He and his relations said that the jaundice had remitted and the stools had become slightly coloured once or twice during the illness. There was a vague history of several previous attacks of colic, possibly biliary, during the previous six years. However, the diagnosis was not certain, and I wrote to the doctor as follows :

" I am not sure of the exact cause of the jaundice, but I am inclined to hope that this may be a stone in the common bile-duct. The most likely alternative is a cancer of the head of the pancreas, pressing on the common bile-duct. In either case, an operation is likely to overcome the jaundice and terrible itching, which the patient says is driving him mad."

The patient was so ill, and suffered so much from itching, that he threatened suicide, and I admitted him into hospital at once.

At the operation, 23rd January, 1930, I removed from the common duct a smooth, spherical stone, the size of a filbert, and also a larger one from the gall-bladder. Afterwards, the itching ceased at once, and the jaundice gradually passed.

The patient appeared to be doing well for about ten days, when he developed a cough, and failure of the liver functions. He died a fortnight after the operation, and at the autopsy there was collapse of the right lung with a little pus in the pleura, but no pneumonia.

CASE 2.

Carcinoma of the Common Bile-duct. Cholecystgastrostomy. Relief and survival for over a year.

W.C.R., a man aged 66, seen June 7th, 1926, for chronic jaundice. After he had been " seedy " for two weeks jaundice gradually developed and deepened, without pain. Anorexia, wasting, itching, insomnia, and loss of mental power were prominent symptoms, and the gall-bladder was enlarged and palpable.

Diagnosis.—Carcinoma of head of Pancreas ; ? Pancreatitis.

Operation.—June 16th, 1926. Gall-bladder greatly enlarged. No stone could be felt, but a hard nodule in lower part of common bile-duct with several secondary nodules in head of pancreas, with enlarged glands around. Cholecystgastrostomy was performed ; great improvement followed ; itching immediately stopped and jaundice gradually passed off, while the patient gained much weight and was able to earn his living again by writing short stories.

A year later, however, anorexia, wasting and loss of strength returned, with constant epigastric pain, but no jaundice, and the patient died some months later, apparently of secondary growths.

CASE 3.

Chronic Pancreatitis. Cholecyst-Enterostomy. Well twelve years later.

P.C.M., seen in 1908, for pain in right hypochondrium, indigestion and jaundice of two months' duration. The pain was very severe at times, and the jaundice, although deep, varied in intensity. The gall-bladder was palpable.

The diagnosis, between calculous and other forms of obstruction of the common bile-duct was doubtful.

At the operation the gall-bladder and common bile-duct were distended, but no stones could be found. The head of the pancreas was enlarged and hard, and was thought to be carcinomatous, but a small piece removed showed only inflamed pancreas.

Cholecystenterostomy was followed by a good recovery, and the patient was well twelve years later, and still working as a police sergeant.

REFERENCES.

1. W. Walters gives the mortality at the Mayo Clinic as 10 per cent. Collected Papers of the Mayo Clinic, 1928, xx, p. 108.
2. Moynihan gives the mortality at 2 per cent. Abdominal Operations, 1926, ii, p. 586.
3. *Guy's Hospital Reports*, 1929, lxvi, p. 219.
4. Col. G. G. Thomson, I.M.S., *Lancet*, ii, 221.

Clinical Cases of Interest

W.D.	Atophan Poisoning	a yellow man.
P.A.	Carcinoma of Suprarenal Bodies	a brown man.
B.P.	Vaquez-Osler Disease	a red man.
D.G.	Morbus Cœruleus	a blue baby.
P.J.	Autumno-æstival Chromatoplasia	a green man.

HOGBIN in his monumental work on Pigment-Receptor Organs has shown that the possibilities of Chromatoplasia must insufferably be linked into some consideration of the endocrine bodies as a whole, and of the suprarenal bodies in particular.

He is able to show that unlike the fusion of other universal coloured circles, the chromatographic background of the human body is, essentially, a black one—to wit, of melanin, a pigment upon which other chromatophores must inevitably be superimposed, in order to obtain human pigmentation in all its forms.

Following upon this line of research, I have been able to satisfy myself that the variant chromatophores[1] referred to above, are not heterologous but homologous in their ultimate presentation. The variants consist in their spatial orientation with regard to the basic melanin molecule. This is particularly well brought out in the time-honoured question related to the genius Felidæ:—why can the leopard not change its spots when such an apparantly simple act is not only possible, but is even expected of any really successful chameleon?

Too surely Adam[2] seems to have been gripped by this deadly doctrine of "the higher, the fewer," and one finds it rather distressing that man, capable of changing the face of the earth, remains immutable in the face of any such adventure upon himself, and moreover, realising that the colour of numbers[3] will gradually cease to cest him with their sensuousness, gropes blindly upwards towards his ideal of right or wrong, clad only in garments of black and white[4]. All attempts to flout the spectres of good and bad[5] have ended in disaster, and only bitter[6] memories remain.

Taunts of colour, together with violation of male possession are still the fiercest evocants of human passion. The aboriginal inhabitants, whether of Papua or Hampstead,[7] still sneer at the palefaces and strange features of the ubiquitous stranger who, in return, hints vaguely of the tar brush where the course of true love has got a little smudged.

Driven from reality[8] one can only now approach it in one's dreams, and here your Englishman, in pursuit of the subject nearest his heart—his stomach, has allowed his whimsies to carry him away and to show him up for the moment as a creator of coloured romances that he supresses in other directions.

Charmed by the easy vagaries of the lower animals, when the Red Lion can supplant the Blue, or the White Horse canter gaily in its Vale weaving its spells of dark magic,[9] he, too, would tint his skin to produce the Black Man, that bogey[2] of all well-minded children, whose bed and supper-times coincide. Then come the Blue Boys, obvious, barred and sinister, offspring of the Black Man, but who are explained away by those poor rational fools as standing images of our proud Navy, to greet us as we pass along our highways.

Then, ever lovers of a scandal, we find the Green Man, kinsman of the Marquis of Granby and himself a Man of Kent.[10]

Peter Jenner was born in 1782 in quite conventional circumstances, nor yet a caul.[11] The only son of his mother and likely to remain so for divers reasons,[12] he spent his early childhood in the village of Benenden.[13] At about the age of three it was noticed that he was turning a brilliant dun colour: he fell sick of a low fever which abated not nor left him for high upon six weeks.

His mother[14] in great fear summoned the doctor to the child. He examined it carefully, applied frictions and sinapisms, and forbade all wheaten cakes and flesh pies.[15]

In the following autumn it was found that he had again changed to a somewhat brownish-golden-blue, exceedingly suggestive of what is now universally termed in certain circles "static umber,"[16] and quite rightly the boy was sharply purged.

To the unbounden amazement of the villagers of Bidenden,[17] careful gossips, as the spring came, Peter was noticed to be growing stouter, and as April the First drew near he verdexed into the shape of Staphisagriæ[18] Semina. Mrs. Jenner was aghast: no child of hers had turned so green before, and as the summer came Peter blossomed.[19] Peter Jenner was a Green Man, one of those faeries who flourish in the sun, pardoned and kissed by its rays, but suffering intolerably from the drought.

Flourishing and succulent in July and early August, he became a little woody in September, and again passed through his autumnal tints. At the New Year he was again a pale, wan child with a not unmatinal phylloptotic[20] colour.

The next Spring was not, however, so kind, for though he budded in his green glory yet his gnarled

frame was no longer capable of further expansion. His phloem left his xylem and to the unbounded amazement of the entire population of Tenterden, who had become covered with blood,[21] he withered, died and was buried.

From a detailed consideration of the data[22] collected, it is more than obvious that two main facts emerge, namely, the existence of a periodic infection, with chlorophyllactasic crises, and the difficulty of deducing facts from educational data.[23] Of the two, we are inclined to favour the theory of Upcart,[24] Waterberry, Rattleknock and Didcott,[25] of infection by strep. viridance[26] especially of the smooth variety (O.H.) as opposed to the bile-staining theory first promulgated by the Scotch School.[27]

J. M. L.

REFERENCES.

1. Hogbin, *loc. cit.*
2. Gen. 1, i.
3. Eutenspiegel, *ibid.*
4. After the manner of the Amalekites, Moses, *person. communic.*
5. Divina Comœdia.
6. Bitters—active principle of beer, staple industry of Kent.
7. Hampstedd—Egebirt is said to sleep here with his fathers. Cf. (1) Aitshison and Robertson, *Med. Juris.* (2) Rex v. Josepheus et Filii, K.B.1782, 496.
8. Reality—Not to be compared with the reality of Descantes, nor yet of Babbitt.
9. Magic (Dark). R
   Sacerdotis - - - j
   Galli nigris - - - j
   Gallenæ alba aa - - s.s.
   Scootorum et Scootarum q.s.
   Stimulandum plebis, misce cum Sacromento Osiridis.
10. Man of Kent—*i.e.*, a Kentish Man.
11. Caul—Apparatus used for safety of sailors at sea ; obsolete equipment of Board of Trade.
12. Divers reasons—No personal communication.
13. Benenden—Not to be confused with Bedenden, a mistake sometimes made by the vulgar and ill-informed.
14. Mother—A mucilaginous substance produced in malt vinegar during fermentation by mould fungus, Cf. M.Dvt. modes.
15. Compared—Modern School of Allergy, with 1001 Tests and other Oriental Fantasias.
16. His sister was a normal flesh colour.
17. Bidenden—In no way to be confused, as by the truly vulgar and exceedingly unenlightened with Benenden.
18. Staphisagriæ, dose 5—15 grains.
19. Indeed he did—old Persian Proverb.
20. Phylloptotic, *i.e.*, ptosis had occurred.
21. This reference has been obscured, possibly by some early boatswain.
22. For complete Bibliography vide "Encyclopædia Brittanica" (£30, with bookcase, £42).
23. See Minister of Education's speech on the Training of Mental Defectives in Sanitary Reform, H.M. Stationary Office, No. 0072.
24. Upcart—means well.
25. Didcott—I never could stand Didcott (Auth.).
26. Andrews—*J. Path. and Hyg., B.M.J., J.A.M.A., A.B.C.*
27. Scotch School—Same as 6 down, inverted.

The Writing of Medical Papers

FIFTEEN hundred new novels were published in England last year. Mr. Edgar Wallace wrote eighty-three of them. Few would complain if such plethoric activity were confined to fiction, which after all no one but a reviewer need read unless he choose. But medical literature has also increased enormously in volume, especially since the war, till now the size of the Quarterly Cumulative Index, one of the most complete compilations of medical references, is alarming to behold ; and the publishers of those other useful volumes, the Catalogues of the Surgeon-General of the U.S. Army, which bring each subject up to date every twenty years or so, threaten to cease their Sisyphean work.

Fortunately, in one sense, in another sense unfortunately, the greater part of medical literature contains little or nothing that is original. There are at least four varieties of medical publication. Of these the most important and by far the rarest is the paper that contains a new discovery of wide application, and based upon observation, induction and experiment. Guy's has furnished a disproportionately large number of such contributions : such a paper was Bright's "Clinical Cases." Another was Gull's on Anorexia Nervosa. In our own time—lest we think there were giants only in former days—there have been the papers of Hurst on Reflex Paralysis, Stokes and Rake on Degeneration in Auerbach's Plexus, Symonds on Subarachnoid Hæmorrhage, Cameron and Osman on Glycopenia and its clinical applications, and Hampson in the treatment of the formerly fatal type of Jaundice in the newly-born.

The second type of paper is a derivative of the first ; it is the product of the journeyman task of measuring, recording and tabulating the various factors involved in the original discovery and of amplifying the details. This constitutes probably the most numerous class of medical literature. It is apt to be dull ; but it is necessary. It is also apt to involve recapitulation ; different workers often set out to repeat the original experiments with the object of confirming or refuting them. Steward and Rogoff's repetition of Cannon's work

"COMBINED ROUND"—CASE I

R. D. G.—A Cranial Conundrum

on adrenalin was a sample of this, which unlike much reduplicated work, miscarried.

There is a third class of compilation, which has grown much in volume in recent years. This consists of an up-to-date, completely documented summary of medical knowledge in a particular field. It has become customary to call such publications "monographs." They are usually written by someone with first-hand knowledge of the subject, who is able to make a critical selection from the numerous sources of his information.

All these three types of medical papers are necessary for the advancement of knowledge. Within such types are papers of all degrees of excellence and importance. The first kind it is given to few to achieve in any form; its highest excellence is attained only by a Harvey, a Hughings a Jackson or a Bright. The second and third types are compassed by many; but the merit depends so much less on the intrinsic value and novelty of the facts discovered, and so much more on the technique both of investigation and presentation, that the range of merit is wider than in the first group. Since these lesser more variable performances are the most that ordinary men can attain, it behoves us to consider the means by which we may in our limited field, achieve some excellence; and even the Olympians may well lend an ear. Technique of investigation can be learned only at the bedside, and in the laboratory, but we may fitly consider here the arm-chair faculty of the orderly presentation of the results of our labours.

But before doing this, however briefly, let us remember, gratefully as becomes us, that there is a bulk of medical literature, which includes most medical books (in distinction from papers). This is the didactic stuff, constituted mainly by text-books. In text-book form it is closely similar to the monographic variety, but differs from it in being more comprehensive but less documented with references. Here above all is clarity of presentation necessary. Efforts at teaching are not, however, confined to text-books; the multiplication of medical societies and journals has produced a flood of purely didactic articles, in which the latest views in the special subdivisions of medicine are summarised in more or less palatable form, especially for the benefit of the general practitioner. The style of these is usually clear enough—of necessity since no medical speaker who is not reasonably clear will receive a second invitation to speak at a meeting of practitioners—but their matter is sometimes surprisingly biassed and even ignorant of the work of others. Here enters the element of personal opinionation and even of discreetly veiled rivalry, which is responsible for swelling the reference-indexes by much reduplication of papers. This tendency is fostered in the text-book class by the number of publishers. There are usually just as many text-books in any branch of medical study as there are medical publishers. Not that this is a bad thing. "As iron sharpeneth iron, so a man sharpeneth the countenance of his friend." A new text-book improves the next edition of its predecessors.

Since the Editors realised that many of you must by the exigency of custom and from professional demands, some day contribute to the already vast output of medical literature—and you must no more be deterred by its volume than people are from procreating children by the number of the inhabitants of an already overcrowded world; "a man's thoughts are as children born to him, which he may not willingly let die"—they asked me to write something about the methods to be followed and the rules to be observed in making acceptable to a reader anything from the presentation of a piece of research, to a monographic synopsis or a text-book. It was a comprehensive instruction which can be only fragmentarily obeyed here.

It has often been said of orations, that they should have a beginning, a middle, and an end. The same admirable platitude holds for any essay or article, literary or scientific. As for the beginning, there should always be an introduction, in which the purpose and scope of the paper should be clearly stated. This can be done in a few short sentences. Following the introduction should usually come some definitions, especially of the actual subject of the essay or research, unless its characteristics are universally known to the audience to whom the work is addressed. Thus it is unnecessary to define rickets to a medical audience; but when the subject is a highly specialised one, it is well to remind the reader at the beginning, in any investigation say of the Lorrain type of dwarfism, of the marks of that condition. There is no better example of what I mean than in the opening of the late Dr. Samuel Gee's "Auscultation and Percussion," that rather neglected medical classic—classical both in style and content, and even now equal to anything that has since been published on the same topic. Its pithiness is unsurpassable. "Suppose a patient with the chest exposed, ready to undergo a physical examination, the physician first of all surveys the chest with his eye, this is Inspection: next, with his hand, this is Palpation: he next strikes the chest, Percussion: and lastly he puts his ear to the chest, Auscultation."

Following the introduction and the necessary proportion of definitions, should come an account of previous works on the same subject. This should not be a mere catalogue, but a critical

survey, in which the introductions or omissions, as well as the established conclusions of previous writers should be set forth, not, however, in any carping spirit, but with a sense of the debt owed to one's predecessors. The composition of this survey should involve the perusal of all the relevant literature that one can find, but need not specifically mention every previous work on the same topic, since some of it is mere recapitulation or is for other reasons unimportant. The sources of reference should always be stated, preferably in a list at the end of the article, and they should always be verified. Purely didactic writings usually omit references, or allude to a few authorities in the course of the text.

After the section on previous literature, which is really the history of the subject, comes the main body of the thesis or paper, constituting what is usually called the " original work " undertaken by the author. This should have at its commencement a careful description ofthe methods used in the research unless these methods are already stereotyped, when they may be alluded to simply by name. Then follows a description of the observations and experiments made, and the results obtained by the writer. The use of tables and graphs is often an aid to clear presentation, but these should supplement the sense of the text and not repeat it. Moreover, tables and graphs are expensive to print, and for that reason alone have usually to be kept to the minimum necessary for the reader's understanding.

There should then be a discussion of the results, and finally a summary of them and of the conclusions drawn is absolutely necessary. No author can compel readers to peruse his entire paper, and he is likely to arouse their irritation rather than excite their curiosity if he omits a concise summary. It is not like a novel of which the prospective reader, if he peruse the last page first, will often find his curiosity evaporate. The last part of a scientific article, if the work described is worth while, should stimulate the interested reader to peruse the whole.

These remarks cover the general form in which medical papers, and especially theses and papers designed to appear in technical journals are usually written. Monographic surveys require slightly different rules that resemble closely those already indicated for beginnings, definitions and historical surveys. A text-book may helpfully be regarded as a series of elementary monographs, but above all things should bear the stamp of personal experiences. Instead of the non-committal balancing of opinion more characteristic of a monograph, there should be a definite bias in favour of the author's own fruits of observation. It is especially this personal element which distinguishes the great text-books—Osler, and in an earlier period, Fagge—from the competent ones.

The literary form in which most medical works may be written is therefore fairly easily defined, but it is with far greater hesitation that I offer a few reflections upon the style. It is difference of style which more than anything else distinguishes English from American medical publications. I have known an audience of American doctors in a first-class medical school receive a mediocre paper with acclamation, principally because (although they did not know this) it was one of the few they had encountered which was couched in reasonable English. People say in excuse for themselves that one is born with the capacity for good literary style, and that it cannot be acquired. This seems improbable, since so many of the best writers have made supreme efforts to attain their position. R. L. Stevenson has recorded his own plodding persistence in this direction; how he used from his early days to go into the country with a pencil and a notebook, and attempt to describe what he saw, writing and rewriting till he felt satisfied he could do no more. His reward was great. Consider the gap between the egregious pseudo-archaism of " The Black Arrow " (" toshery," Stevenson himself called it), and the achievement of clearness and economy in style in "The Master of Ballantrae" —surely one of the best novels in the language. John Richard Green, who is usually credited with easy fluency, is said to have re-written some chapters of his " History " ten times.

A sufficient, even probably a good style can usually be acquired. The acquisition is worth attempting; for even technical authors fail of just recognition for lack of it. There are some rules to be followed and much practice is necessary, and nothing helps more than to be steeped from one's young days in our marvellous heritage of English prose. No one brought up on the Authorised Version of the Bible can fail to have some feeling for style. With it is usually associated Bunyan's " Pilgrim's Progress," with similar results. After these, to form a background upon which an individual style shall gradually develop, such writers are available as Sir Thomas Browne, for sonorousness and balance—not only his " Religio Medici," but also even more his " Urn Burial," Francis Bacon (The Essays) for his Latin economy, his so much matter in so little space; Addison, Southey (The Life of Nelson and some histories); Lamb (even some inarticulate echo of him in the memory will relieve a ponderous style), Macaulay, Stevenson, and even Walter Pater (not " Marius," but some essays). It is not that a man should try to make a copy of any of these his own, but with such

traditions, and such standards as they afford him, he cannot write badly.

The first principle of a good style is brevity—the greatest amount in the fewest words compatible with the reader's comfort. The writings of most authors could have many words deleted, and yet gain in clarity and vigour. Here again Dr. Gee's "Auscultation and Percussion" is pre-eminent among medical works. Perhaps it savours too much of Ciceronian Latin to be completely acceptable nowadays, but the more closely we can approximate to Gee's concise simplicity, the better for us all, authors and readers.

The second fundamental of a good style is rhythm. Some people have a better ear for music than others. It is not so well known that there is also an "ear" for style. I suspect most good writers of sounding their sentences in their minds as they write them. This practice does not depend like the musical ear on unborn gift, but upon being immersed from early youth in the works of the great prose writers, and hardly less of the poets, from Shakespeare to the now (mistakenly it seems to me) despised Tennyson. Some maintain that sound obscures sense, and that one may be lulled by the sonorous beauty of a passage into an overestimation of its contents. How many have been consoled by the thought that "Faith is the substance of things hoped for, the evidence of things not seen"? But would a logician regard such a definition as anything but a tautology? Sound and sense should reinforce each other as they do in the magnificent closing chapter of the book of Ecclesiastes, and in briefer compass and great simplicity in the old evangelist's description of how his religious ecstasy seized him as he walked: "As I lifted up one foot, it seemed to say, Glory; and as I lifted up the other, it seemed to say, Amen."

The third fundamental is the correct use of words. There are really no synonyms. Only one word is fully correct in a given place, but sometimes to avoid a jangling repetition it is allowable to substitute what is called a synonym—a word with approximately the same meaning. For those to whose memory synonyms do not readily occur, Roget's Thesaurus is available for reference. Everyman's Library contains a cheap edition. But the only thing that enables us to use a word with unfailing correctness is to know its history. The history of individual words is a fascinating study in itself. Open the N.E.D. anywhere and you at once become enthralled. There are books about words and phrases like Logan Pearsall Smith's "Words and Idioms"; but the most entertaining of all is Fowler's "Modern English Usage." There, for example, opposite "Highbrow" you will find the simple instruction: "See Mugwump."

Style and grammar are distinct but interdependent. Grammar need not be dull as it is taught at school. One of the most interesting books I know is "The King's English," by the brothers Fowler. It is more delightful than most novels and more readable than text-books; yet it is about grammar. From it also one can learn the principles of punctuation. Punctuation is a comparatively recent invention, but so great a one that I am inclined to think of punctuation as an art. Like all arts it presupposes a certain amount of understanding on the part of the reader, else its subtleties and usefulness are mostly thrown away. Correctly used, punctuation is an aid not only to the sense, but to the rhythm and the style generally. It can be overdone. A writer can break out into a "plague of spots."

This is not the place to give grammatical details. "The King's English," Sir Clifford Allbutt's "Notes on the Composition of Scientific Papers," and Herbert Read's "English Prose Style" will give what is necessary in this and other directions for improving one's capacity for clear writing.

To know how to end is the last accomplishment of style. Those who have read the glorious closing paragraph of the Pilgrim's Progress understand this. It would be presumptuous of me, after saying so much, even to attempt to end this essay with an ending of my own invention; and so, remembering always that simple writing requires simple endings, I give you this, one of the most charming farewells in literature. It is from Colet's "Accidence," and apart from its exemplary nature it is not inappropriate to our purpose in its substance.

"Wherefore I praye you, al lytel babys, al lytel chyldren, lerne gladly. . . . Trustyng of this begynnyng that ye shal procede and growe to parfyt lyterature, and come at the last to be grete clarkes. And lyfte up your lytel whyte handes for me, whiche prayeth for you to God: to whom be all honour and glory.... Amen."

Notice

THE Fifth Fison Memorial Lecture will be delivered by Professor G. Elliot-Smith, M.D., D.Sc., F.R.C.P., in the Medical School, on Tuesday, May 13th, 1930, at 5 p.m. Subject: "The Distinctive Attributes of the Human Brain." Chairman: Sir E. Farquhar Buzzard, Bt., K.C.V.O., M.A., M.D., F.R.C.P.

Application for tickets should be made, as soon as possible, to the Dean, Guy's Hospital Medical School, London Bridge, S.E.1.

Current Cases—III.

A Case of Addison's Disease

THIS patient, F. A., male, aged 48, was admitted into John Ward on January 17th, 1930, complaining of increasing weakness during the past three months.

Until a year previously he had always been well. In February, 1929, he had an attack of influenza, after which he felt run down and began to suffer with pain in his abdomen. The pain persisted and he began to lose weight, so admission to Lazarus for investigation was arranged. He was in the ward for a week during September, but as his pain had completely gone while waiting to come in, he was not investigated very fully. The records show that his temperature was normal throughout this week, and his average pulse rate was 80 per minute. At this time he was not at all feeble and for a few weeks afterwards he felt quite well.

In October, 1929, he was taken ill with pain in his back, put down to muscular rheumatism. This got better, but he was left feeling very weak, and this weakness got steadily worse until the time of his re-admission. He also continued to lose weight, being at least a stone below his normal, but there was no recurrence of pain, either abdominal or in the back.

On Admission.—January 17th—

He was weak and thin though not cachectic. His skin was rather dark especially the areolæ and nipples, just enough to suggest at once the possibility of Addison's disease. There was, however, no pigmentation of the axillæ or mucous membrane of the mouth, and furthermore, he said that the dark colour was his natural one. The spleen was moderately enlarged, coming down two inches below the costal margin on inspiration. The blood pressure was 128/82 and there were no other abnormalities on physical examination. Blood examination showed red cells 4,300,000 per c.mm., hæmoglolin 85 per cent., white cells 1,700 per c.mm.

He was watched for the next three days and found to have an irregular pyrexia ranging between 98° and 102° and an average pulse of 100. All temperatures were rectal. On January 21st, the blood pressure was found to be 87 systolic and the following day it was 94/65. The patient's condition was unchanged. On January 24th, the white count was 2,100 per c.mm. He was weaker than when he came in. There was some doubt as to whether he was darker. The spleen was still palpable, but smaller than a week previously. The temperature tended to rise higher ; once to 103.8°.

By this time the results of a number of investigations had come to light. The Wassermann reaction, sputum examination, Van den Bergh, Widal reactions for typhoid group and micrococcus melitensis were negative. X-ray of the chest showed nothing abnormal. A test meal showed achlorhydria. There was no occult blood in the fæces.

The subsequent course was as follows—

January 28th—Blood pressure 88/60. White count 1,640 per c.mm. The patient was a little weaker.

January 29th—He had his first rigor. A blood culture taken during this was negative.

January 30th—His pigmentation was definitely noticed as being deeper. There was none in the mouth. B.P. 122/80. During the past few days his temperature had shown astonishing variations. One evening it was 103.8°, the next evening 95.3°. The temperatures were rectal and carefully taken.

January 31st—Dr. Knott examined the patient's blood and found red cells 4,420,000 per c.mm., hæmoglobin 86 per cent., white cells 2,700 per c.mm. Differential count, polymorphs 43 per cent. Lymphocytes 32 per cent., Eosinophiles 0 per cent., Basophiles 0 per cent., Hyalines 25 per cent., that is a fairly uniform reduction of all cells excepting the hyalines.

February 2nd—He had another rigor. Evening temperature 105.6°. Becoming definitely drowsy and rather resentful of questioning and examination.

February 3rd—Extremely weak and drowsy though when roused he was perfectly intelligent. He could only turn in bed with a great effort, eating and even swallowing were difficult owing to his weakness. As he drank, water dribbled from his mouth. The blood pressure was 62/40. For the past week he had been having hypodermic injections of adrenalin, 1 in 1,000, 5 minims every 4 hours, but they had scarcely any effect, sometimes the pressure was raised 3 to 5 millimetres for a few minutes.

He was not expected to live through the night, but the next morning he was distinctly better, the blood pressure having risen to 84/62.

This improvement was maintained for several days, the pressure on February 7th being 115/75. At this stage he was started on a high cholesterin diet (eggs, brain, tripe), Dry Extract of Suprarenal 30 grains thrice daily and Adrenalin hypodermically 10 minims every 6 hours.

February 8th—Again weaker. Pigmentation more marked though still none in the mouth. The spleen was no longer palpable. B.P. 87/58.

During the next three days he gradually sank, his temperature fluctuated between 98° and 106° and he had several rigors. He became weaker and swallowed with increasing difficulty. He was not weighed, but looked more than a stone lighter than on admission.

February 11th—He became comatose and died about mid-day.

Post-mortem Examination—This revealed a bilateral neoplasm of the suprarenals, on the left the tumour measured 2½ by 1½ inches, on the right 1 by 1½ inches. There were two secondary nodules half a centimetre across, one on the left pleura, the other on the visceral layer of the pericardium. The spleen was twice the normal size; it must have regressed considerably as it was a great deal larger than this on admission. Apart from a terminal early pneumonia at the left base nothing else abnormal was found.

COMMENT.

In the absence of other evidence it is fair to assume that the neoplasm was the cause of his abdominal pain during the early part of 1929, and of the pain in the back during October of that year. He must therefore have had the growth when he was in the Hospital in September though it would naturally not be capable of detection. It is of particular interest to note that he was apyrexial at that time.

At the end of the first week after readmission, the patient presented the following syndrome; asthenia wasting, low blood pressure, enlargement of the spleen, leucopenia and pyrexia, together with a doubtful pigmentation. As the pigmentation became more marked and above all, when the systolic pressure fell to 62 millimetres, the diagnosis of Addison's disease became more certain. It was suggested that there was an added miliary tuberculosis from the (as was thought) caseous suprarenals.

In addition to the unexpected pathology, unusual features of the case were the leucopenia, the enlarged spleen and the very erratic temperature. The absence of vomiting and the absence of pigment from the mouth were also atypical.

Other points of interest were:—The gradual diminution in size of the spleen while under observation. The temporary improvement and survival for a week after the systolic pressure had fallen to 62 millimetres. Four days later it was 115; the coincidence of the phase of extreme prostration with that of very low blood pressure and the improvement as the pressure rose; the absence of any therapeutic effect of adrenalin or dried suprarenal extract even in very large doses.

I am indebted to Dr. Poulton for permission to publish this case. J. C.

The Students' Club General Meeting

AT the Annual General Meeting of the Students' Club, the following officers were elected:—

Chairman—E. G. Slesinger, Esq., M.S.

Hon. Treasurer—G. B. Pritchard, Esq., L.D.S.

Hon. Sec.—D. W. C. Northfield, Esq., F.R.C.S.

Committee:—

L. J. Witts, Esq., M.D.
F. Cook, Esq., F.R.C.S.
E. R. Boland, Esq., M.R.C.P.

J. C. Wharton, Esq.
K. S. Southam, Esq.
W. H. Lewis, Esq.
} *Student Directors Catering Company.*

A. J. D. Lewis, Esq.
J. S. Batchelor, Esq.
} *Representatives Clubs' Union Council.*

The President of the Residents.

Papers by Guy's Men

H. W. Barber. (1) Mycosis fungoides; (2) Eruption (? antipyrinides): a case for diagnosis. *Proc. Roy. Soc. Med.*, 1930, xxiii, 810, 811.

J. M. H. Campbell. Angina pectoris and coronary thrombosis. *Clin. Jour.*, 1930, 193.

L. Forman. Erythrodermic pemphigoid lichen planus. *Proc. Roy. Soc. Med.*, 1930, xxiii, 812.

E. G. G. Little. (2) Erythema circinatum, ? Erythème annulaire centrifuge of Darier; (2) Folliculitis decalvans; (3) Parapsoriasis; (4) Lichen planus bulbosa. *Proc. Roy. Soc. Med.*, 1930, xxiii, 809, 810.

O. G. Morgan. Parinaud's conjunctivitis (?) case for diagnosis. *Proc. Roy. Soc. Med.*, 1930, xxiii, 840.

Change of Address

R. G. Wilshere, L.D.S., R.C.S., 52, Upper Brook Street, Grosvenor Square, W.1. *Mayfair* 1171.

G. A. R. Winston, Flat 14, 20 Avenue Koubbeh, Heliopolis, Cairo.

G. N. Wood, M.B., 45, Wellington Square, Hastings.

J. F. H. Stallman, M.B., B.S., F.R.C.S., The Limes, 55, Barton Street, Gloucester. *Tel.* 2320.

Medical and Surgical

The Internal Secretions of the Ovary. By A. S. PARKES, M.A., Ph.D., D.Sc. Published by Messrs. Longmans, Green & Co. *Price* 21*s.*

OVARIAN function is one of life's predominant factors and one of physiology's most elusive problems. As such it has been accorded intensive study, particularly during recent years. A wealth of experimental and observational evidence has accumulated ; but the interpretation thereof has been complicated by a plethora of blatant pseudo-scientific testimony. Dr. Parkes has proved himself a sure guide through the resulting maze. We cannot too highly recommend his excellent monograph. It affords a reliable and entertaining review of the present position of that knowledge of the subject to which the author himself has so largely contributed. The absence of wild speculation and assertion by no means detracts from the interest of his work. Conflicting data and hypotheses have been fairly treated though not unduly stressed. It may be regretted that Dr. Parkes has seemed from time to time to overlook the tremendous importance of the clinical problems that await solution. But actually his attitude in this respect is all to the good : first and foremost we require a solid foundation of fact. Incidentally, it is now generally recognised that clinical research in this direction is being most seriously impeded by various commercial interests and their attendant legal restrictions.

The subject matter has been admirably presented and illustrated. A minimum of space has been devoted to hackneyed anatomical and histological features ; on the other hand the morphological aspect of the œstrous cycle has necessarily been reviewed rather fully. The endocrine control of the female reproductive organs and the various ovarian secretions have been considered in detail. A fairly complete statement of relevant fact and hypothesis has been attained without loss of proportion, style, or interest. The importance of the anterior pituitary factor has been established, and the controlling part played thereby in the mechanism of ovarian regulation has been thoroughly discussed. There is brief reference to the factors concerned in parturition, as unfortunately the course of physiological events is still somewhat indefinite. Dr. Parkes' X-ray observations demand particular attention. Over and above the immediate objects of his experiments, they provide food for serious thought in these days of radiological enthusiasm.

The bibliography includes practically all relevant literature up to the end of 1928. The publishers have contributed to the general excellence of a book which everyone should read, however remotely interested.

The monograph is one of a series originally instituted by the late Professor Starling. It is to be hoped that the present editors will further continue the good work ; an ignorance of physiological principles and scientific procedure is largely responsible for the medical muddle of to-day. The Chancellor of the Exchequer is not entirely to blame for our deficiencies and defects.

F.C.

Recent Advances in Pulmonary Tuberculosis. By L. S. T. BURRELL, M.A., M.D., F.R.C.P. Published by Messrs. J. & A. Churchill. *Price* 12*s.* 6*d.*

GOOD Wine, they say, needs no bush, but a book, if it is to be sold, requires a title. It is as important therefore that the title should accurately represent the contents as it is that a sign should accurately represent the shop. A town in which the wine shops sported barbers' poles and the barbers' shops sported the gilded balls of Lombardy would move us to justifiable resentment and conduce to the breaking of the King's Peace.

So, although this is an excellent book, it is sailing under false colours. Anyone who hopes to find details of the latest work on the diagnosis and

treatment of Pulmonary Tuberculosis will be disappointed.

At least one text-book, published several years earlier, contains a fuller and more critical survey of the material dealt with by this book, and a little turbid water has oozed through the arches of London Bridge since then.

I should imagine that the author, disappointed by the paucity of the material available and finding the assessment of its permanent value impossible, gave up the task in despair and decided to write a short text book giving his own experience of some modern methods and the results obtained therefrom in his hands. In this, he has admirably succeeded and the result is an excellent book full of sound practical suggestions from a wealth of clinical experience, but it does not fulfil the expectations raised by the title. The book deals mostly with treatment and this is led up to by chapters on Prevention, Diagnosis and Prognosis which do not contain much that is new except a short exposition of Calmette's method of Active Immunisation, of which just enough is said to show that there is a wide divergence of opinion on insufficient data on both sides.

The author's own personal experiences with the use of Sanocrysin are dealt with and there are many very helpful suggestions. Artificial Pneumothorax therapy is fully dealt with and this is the only part of the book in which much reference is made to foreign work.

This book, in short, is not well served by its title. It is platinum masquerading as gold, and for that reason must be subject to criticism.

A book dealing purely with recent advances in the Treatment and Diagnosis of Pulmonary Tuberculosis from an International standpoint is badly wanted, even although the material available makes one thankful that Tuberculosis resisting frontal attacks is being so successfully attacked in the germ, that one hopes that tuberculosis in this country may soon be as rare as leprosy.

E.R.B.

Chemical Methods in Clinical Medicine. By G. A. Harrison, M.D., B.Ch. Published by Messrs. J. & A. Churchill, London, 1930. Pp. 509, 2 colour plates and 63 illustrations. *Price* 18*s.*

THE ever-increasing importance and complexity of chemical methods as applied to clinical medicine make it imperative that the clinician should be able to assess the value of chemical findings. This book gives a very fair criticism of the various methods at present in use, and of the interpretation and importance of the results obtained. Tests of the urine, renal, hepatic and pancreatic efficiency, and various analyses of the blood, cerebrospinal fluid, gastric and duodenal contents and fæces, and a chapter on Renal Metabolism and Milk are included. There is a very good and full list of references to original papers, in which details of methods described in the text are to be found. The author gives the results of his large experience in assessing the value of the various tests, and it is only in matters of opinion that one can offer criticism. Some workers have found the lævulose tolerance test and the fractional test meal to have been of more value in establishing a diagnosis than the author appears to have done. The table giving the composition of normal blood allows a rather wider range than is usually found. For example, the fasting blood sugar is given as 60 to 120 mgms. per 100 c.c,. and amino acid nitrogen as 3 to 8 mgms. per 100 c.c. These figures are apparently compiled from the published results of numerous workers. An individual worker would probably find his "normal" range much narrower. Some would not agree that the calcium content of serum is usually normal in pregnancy and sprue.

When the only criticism that can be made of a book of this description is that it allows a wide range of normal figures, and is critical of the value of certain tests, it is obvious that it can be thoroughly recommended as a book that is much needed, to enable students and others to realise the value of the help that modern science can give to the ancient art of medicine.

C.H.O.

Recent Advances in Cardiology. By C. F. T. East, M.A., M.D., F.R.C.P. and C. W. C. Bain, M.C., M.B., M.R.C.P. Published by Messrs. J. & A. Churchill, Ltd. *Price* 12*s.* 6*d.*

THE authors of this new volume in an already extremely popular series intentionally confine themselves to a summarised presentation of knowledge that has accumulated during the past thirty years concerning diseases of the heart and circulation. These self-imposed limits, though quite arbitrary, must enhance the value of the book not only for the expert in cardiological matters, but also for the more general reader seeking a sound exposition of the newer ideas in this department of medical science.

Early in the present century physiological enterprise on the part of Mackenzie and Lewis led to the rapid development of an entirely different conception of the pathological basis of at least one great class of cardiac disorders, namely, the arrhythmias, and as a direct result there has taken place considerable improvement in therapeutic control that was originally quite blindly empirical. The attention thus focussed on the cardiac musculature also resulted in much more balanced views concerning the consequences of cardiac damage by

chronic infective processes. More recently the still unsolved problem of hyperpiesis has led experimental work back to the vascular system where with the work of Harvey experimental medicine really commenced. This book, in dealing with the experimental work of the present century is thus more definitely concerned with the elucidation of the mechanism of the heart itself. The results of the more recent return to the peripheral circulation, although promising, have not as yet settled down into anything very definite.

The position of the electrocardiogram, firstly as an invaluable help in the diagnosis and treatment of the arrhythmias when a defective myocardium is suspected on clinical grounds is now more or less settled. Throughout the book prominence is given to those disorders in which the clinical picture has recently become much more clear. Thus the initial chapters deal with the clinical differentiation of coronary thrombosis from the conditions with which it was formerly often confused. The various theories as to the pathology of angina are next dealt with, the results of recent investigations on the coronary circulation being considered, and a novel suggestion being made as to the influence a diseased and inelastic aorta may have on the head of pressure in this important set of vessels. An excellent account of the disorders of cardiac rhythm goes fully into the theory of various movements and the indication for treatment with quinidine together with the essential electrocardiographic findings. Central and peripheral circulatory failure are considered at some length and the value of the various diuretic drugs advocated in the treatment of cardiac œdema carefully assessed. The chapter on infective conditions notes the emergence of *endocarditis lenta* as a definite clinical entity following the war, and provides a neat but somewhat brief summary of the present views concerning rheumatic carditis. Separate sections are devoted to the use of digitalis, the vagus nerve as it concerns the heart, and the recently developed radiographic examination of the heart and great vessels.

This book ably maintains the high standards set by other volumes in the *Recent Advances* series and will mostly appeal to those cut off from modern cardiological teaching and unable to spare the time required to pursue an original exploration of a literature that is rapidly assuming appalling dimensions. It would be a mistake to address such a book to the specialist, and this the authors have purposely avoided so that their work becomes both readable and useful as a help in the problem of diagnosis and treatment met with outside the scope of definitely specialist practice.

The paper and binding are of Messrs. Churchill's usual high standard and uniform with other works in this series, as is also the price.

Guy's Hospital Reports. Vol. 80, Jan., 1930. Published by the *Lancet*, Limited. *Price* 12*s.* 6*d.*

THE current volume of the *Guy's Hospital Reports* contains twelve contributions.

First is an appreciation by Sir Alfred Fripp of Sir Cosmo Bonsor, both as a man and as a governor of the Hospital. In the capacity of treasurer he was greatly responsible for the revolutionary improvements and extensions which have occurred during the past thirty years.

Sir William Hale-White writes an interesting account of the murder of Dr. Parkman by John White Webster, who entered Guy's as a surgeon pupil in 1815. He later became Professor of Chemistry and Mineralogy at Harvard. Whatever may have been his ability as a mineralogist, he appears to have been a dismal bungler as a murderer.

Mr. Spurrell in an interesting article confirms and amplifies the work of previous investigations on the effects of ligation of the main vessels of a limb upon its circulation. He shows what appears to be a circulatory paradox, namely, that the blood supply is better maintained in the case of cats and frogs when both artery and vein are tied, than if the artery alone is ligatured. It is unfortunate that the plate chosen to illustrate this point does not demonstration it more strikingly.

Mr. Ellis describes a very rare case of hysterical blindness in which the pupil reflex to light was lost. Normal vision was recovered as a result of psychotherapy. It would have been interesting to know the determining cause of such a second attack of hysterical blindness, after a latent interval of ten years from the original war neurosis. After reading of this case one is impressed by the completeness with which a disorder of functional origin may simulate an organic condition. In the next contribution one realises, in addition, how thorough and how serious a course may be adopted in such a case. Dr. Conybeare here gives an account of a fatal case of anorexia nervosa. The anorexia was initiated as a result of a fasting cure which the patient had been advised by her medical practitioner to adopt, as a cure for rheumatoid arthritis, and thus illustrates one of the less common dangers of prolonged fasting.

Dr. Campbell and Mr. Morgan discuss an unusual case of multiple thrombosis. They suggest a single pathology to account for the symptoms of a venous thrombosis of the arm, cardiac embarassment and bilateral tubular origin, which occurred intermittently.

In an article emphasising the ætiological relationship of dental sepsis and subacute bacterial endocarditis, Mr. Rushton points out the danger of removing a septic focus or even an apparently normal tooth in a patient whose resistance is low. The danger is increased in those with heart lesion.

Mr. Close gives some observations on acute tonsillitis. He discloses that its maximum incidence like that of diphtheria and scarlet fever falls in October. That changes in the blood chemistry, associated with a lowered alkali reserve, may persist for some weeks after a severe streptococcal tonsillitis has apparently cleared up, is emphasised. On this account he advocates a more prolonged confinement to bed than is generally accorded in this condition. One would like to know whether the complications of which he speaks occur sufficiently frequently, especially in adults, to make such prolonged treatment practicable and economically sound.

Dr. Osman, writing on the diet in chronic nephritis, concludes that alkali-forming foods should form the basis of the diet. He condemns the use of a too restricted protein diet, since addition of alkali can always neutralise its acid-forming properties. Dr. Warner shows that the basal metabolism in chorea is raised, and therefore condemns the administration of thyroid in these cases.

Mr. Ormond, in a most interesting paper, gives a very complete account of the condition of arachnodactyly and discusses its ætiology. He argues that both the general and the ocular symptoms may be explained as a failure of normal development of the mesoblast. This he suggests is due to the interference with some chemical influence of endocrine nature, which acts normally early in embryonic life. He thinks that the condition is likely to prove a hereditary disease.

Finally, Mr. Ralph Thompson contributes the first part of a report on cases of urinary lithiasis, which have been treated in the Genito-Urinary Department from October, 1910, to September 1929. He adopts an original method of classing the cases into those with (1) travelling stones, whose origin is probably in the renal pelvis and (2) those with resting stones originating in the renal parenchyma.

Ultra-Violet Radiation and Actinotherapy. By E. H. Russell and W. K. Russell. Published by Messrs. E. & S. Livingstone. 3rd Edition.

THE authors of this book are to be congratulated on the compilation of all its chapters. The introduction explains in a definite and concise way why this form of medical treatment has been abused, and then continues to show the immense value that actinotherapy has in helping the different forms of diseases.

This book should be read by everybody, though at first sight it looks as though one should put aside special time during the day in order that one can digest its contents. The general practitioner will find it invaluable as it gives minute directions as to treatment and the right type of case to which one can apply this form of therapy. The student should read this book, as it will help him now as well as in the future.

The chapters on Radiation and how to adapt Direct and Alternating Current are of considerable value and very simply explained.

When one thinks of the number of different kinds of lamps that are on the market each of which is supposed to be better than the other it is very difficult to decide which one should buy. The authors go very carefully into the possibilities of each lamp and explain in an unbiased way the advantages and disadvantages of each one. The Kromayer lamp is well reviewed with other quartz mercury vapour lamps, as are the other open flame lamps such as the carbon, tungsten and iron arc. The different form of applicators are well described, such as those used for ear, nose and throat work, and those used for skin diseases and slow healing wounds. The portable lamp is brought to the reader's notice and it is quite easy to see how one can apply this form of treatment in any home where the current is laid on.

The chapter on the biological aspect of the subject is of considerable interest and the one on technique is so well explained that even a layman could soon pick up what is necessary and give therapy under proper supervision.

The chapters on the different forms of diseases are of considerable value, and all who are interested should gain a considerable degree of knowledge as to which type of patient this treatment would benefit ; especially does it show the great therapeutic value of actinotherapy in poor districts. The chapter on dental therapy could have been enlarged, but even here most things are suggested for the treatment of oral sepsis, pain and so on. The biologist and the veterinary surgeon find this therapy of great value in their work.

This book is strongly recommended though it takes a great deal of reading.

A Text-book of the Practice of Medicine. By Various Authors. Edited by Frederick W. Price, M.D., F.R.S. (Edin.). 3rd Edition. Published by Humphrey Milford. *Price* 36*s*.

SINCE the last edition of this book, nearly four years ago, it has steadily gained in popularity, and while not holding quite the same place as a text-book written throughout by an individual author, does not in our opinion suffer at all in this respect for the branches of medicine have become too specialised for any one man to be conversant with all to an extent that ensures his writings to be within even five years of the most recent advances, or for him in any way to be able to assess them at their true value.

While the editor is to be congratulated in the main on the excellent balance he has kept between the different subdivisions of the book it came as a surprise after, for example, reading the very full accounts given of many, some of them obscure, tropical diseases, that several diseases of children, quite apart from their many general disorders of nutrition, should hardly be mentioned, *e.g.*, cœliac disease and tabes mesenterica.

To this new edition many fresh articles have been added, so that at the same time the book is more complete than previously, and also has been brought up to date. The section devoted to diseases of the digestive system makes particularly good reading, while those on diseases of the skin and diseases of the nervous system are at once concise and lucid in their descriptions. The book is in fact to be recommended, especially to be read in conjunction with such a standard text-book as Osler, for being written by a number of specialists, individual views creep in, which, while adding to the interest of the articles, perhaps would not be accepted by the majority of clinicians. Speaking from personal experience, we have found the book exceedingly useful in the past, and are not surprised at its growing favour with practitioners and medical students alike.

Tropical Diseases. By PHILIP MANSON-BAHR, M.D. 9th Edition. Published by Messrs. Cassell & Co. *Price* 31*s.* 6*d.*

THE latest revised edition of this excellent treatise on diseases of the tropics maintains the high standard of its original author, Sir Patrick Manson. The work is too well known to require much comment. Suffice it to say that the book is thoroughly up to date, is compact and not too bulky for those who have to travel under conditions abroad where the weight of one's baggage is a serious consideration.

The appendix, which is absolutely essential in a work of this kind, is consistent with the size of the volume, containing practically no irrelevant matter yet not skimping that which is essential.

A few printer's errors might well be corrected :— (1) P. 172, lines 38 and 39, " strains " should be substituted for " Stains " ; (2) P. 196, line 22, "by" should be omitted ; (3) P. 250, the note under the illustration should read " Figs. 59 and 60," instead of " Figs. 48 and 49 " ; (4) P. 280, in the 4th line of the compressed type, " 1906 " should be substituted for " 1916 " ; (5) P. 642, line 20, " form " should be substituted for " from " ; (6) P. 148, line 24, the dose of Stibacetin should be " from 0.1 grm." instead of " from 0.01 grm " ; (7) P. 758, in the illustration of the female ancylostome the mouth is shown as opening on the ventral surface—it opens on the dorsal surface.

Dental

Outlines of Dental Science. Vol. XIII. Dental Local Anæsthesia. By JOHN JAMES, L.D.S. Lecturer in Operative Dental Surgery, King's College Hospital. Published by Messrs. E. & S. Livingstone, 1929. Illustrated. *Price* 7*s.* 6*d.*

MR. JAMES has written a sound little book which will serve as an excellent introduction to the subject of local anæsthesia for the third year dental student. The book is not without value to those thoroughly conversant with the practice of local anæsthesia, for Mr. James has embodied in it the sum of twelve years' experience. He has modified and tried his methods until he is now able to set out his completed technique and considered opinions, some of which are strikingly unorthodox ; for instance, Mr. James maintains that the use of cocaine and Parrott's method of injecting into the cancellous bone obviates the use of regional anæsthesia in the mandible and although some dental surgeons may use cocaine solutions, few indeed use Parrott's method.

At the beginning the style and construction are poor, but as he proceeds Mr. James gathers strength and his chapters on " Complications " and " Contra-Indications " make one hope that this will be the first of many books. Mr. James evidently wishes his readers to consider his technique in its entirety as he makes no mention of many advances—stainless steel needles, ampoules and direct mandibular injection among others.

The illustrations are poor for a book of this price and do not do justice to Mr. James's subject-matter.

The Physiology of Oral Hygiene and Recent Research with Special Reference to Accessory Food Factors and the Incidence of Dental Caries. By J. SIM WALLACE, D.Sc., M.D., L.D.S., Lecturer on Preventive Dentistry, King's College Hospital. 2nd Edition. Published by Messrs. Baillière, Tindall & Cox, 1929. Illustrated. *Price* 10*s.* 6*d.*

THE second edition of this work is augmented by some more recent material, notably a selection of lectures by Mr. Sim Wallace during a recent lecture tour through North America. The present volume should join Mr. Wallace's other books on the shelves of every dental surgeon, for his teachings in respect of oral hygiene are accepted by both the dental and medical professions and by the general public.

His condemnation of manufactured and purified sugars as articles of diet and his teaching of the necessity for terminating all meals with a detergent have no doubt been aided in general assimulation by the dictates of feminine fashion, but there are few to-day who would contest Mr. Sim Wallace's

theory. It is a pity Mr. Wallace does not mention the danger of withholding sugars from children with tendencies to acidosis, as this is a very real danger into which his followers may be led.

The presentation of a reasoned hypothesis by means of a collection of lectures is perhaps not the ideal method, as there is bound to be much repetition; but whatever this method thus loses it gains in freedom of style and there is genuine pleasure and stimulus given by Mr. Wallace's clear thinking, concise expression and forceful criticism. There is an excellent address to students in the chapter headed "Dental Research" and in the later chapters, where his conclusions on our present day knowledge of preventive dentistry and oral hygiene, are summed up, his lucid style is seen to its best advantage.

It is a pity that in some chapters the references are collected at the end and in others distributed as footnotes, but in other respects the production of the book is above reproach.

Nursing

Fevers and Fever Nursing. By EVELYN C. PEARCE. Published by Messrs. Faber & Faber.

THE value of this book is essentially practical. Every private nurse would do well to possess it.

The chapter on the general nursing of infectious cases in private work and in hospital wards is particularly helpful, since it shows the nurse how to utilise the material she has at hand.

Since the author lays stress on the essential nursing points in each type of case, her book is a safe one to follow.

The chapter on venereal diseases is disappointing as here the author seems much less familiar with her subject.

The matter contained in this book is admirably arranged and the style is clear.

Guy's Hospital College Catering Company, Limited

BALANCE SHEET, 31st JANUARY, 1930.

LIABILITIES.

	£ s. d.	£ s. d.
Capital—		
Authorised—		
1,000 Shares of £1 each	1,000 0 0	
Issued—		
820 Shares of £1 each, 12*s.* paid	492 0 0	
Add—Calls in Advance	2 0 0	
		494 0 0
Sundry Creditors		617 16 1
Sundry Creditors—		
Guy's Hospital Clubs' Union Donation		50 0 0
Students' Club Wine Account		72 14 9
Reserve for Dividends		59 0 6
Reserve for Income Tax		160 0 0
Reserve Account		209 11 9
Profit and Loss Account—		
Net Profit for the year to date	166 4 3	
Less—Balance at 2nd Feb., 1929	107 3 9	
	59 0 6	
Less—Reserve for Dividend at 6 per cent. for the two years ended 31st January, 1930	59 0 6	—
		£1,663 3 1

ASSETS.

	£ s. d.	£ s. d.
Plant, Furniture & Equipment—		
Plant and Machinery at Cost	290 10 4	
Less Depreciation	58 2 0	
		232 8 4
Linen	33 11 9	
Less Depreciation	6 14 4	
		26 17 5
China and Glass	102 15 8	
Less Depreciation	20 11 0	
		82 4 8
Cutlery and Plate	100 6 8	
Less Depreciation	20 1 4	
		80 5 4
Utensils	57 12 7	
Less Depreciation	11 10 4	
		46 2 3
Stocks—		
Provisions	104 0 5	
Minerals	5 3 2	
Tobacco and Cigarettes	44 0 8	
Stationery—Books, etc.	19 3 2	
		172 7 5
Sundry Debtors—		
Special Lunches & Dinners	66 16 9	
Residents' Board	158 6 10	
Manageress's Float	15 0 0	
Renewals and Replacements	3 8 6	
Salaries and Wages	5 0 0	
Deposit—Telephone	3 10 0	
		252 2 1
Cash—At Bank	767 4 5	
In Hand	3 11 2	
		770 15 7
		£1,663 3 1

AUDITORS' REPORT.

We report to the Members that we have audited the above Balance Sheet and have obtained all the information and explanations we have required. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs, according to the best of our information and the explanations given to us and as shown by the Books of the Company.

KEMP, CHATTERIS, NICHOLS, SENDELL & CO., *Chartered Accountants.*

T. B. JOHNSTON
O. IVE
Directors.

36, Walbrook, London, E.C.4.
28th February, 1930.

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31st JANUARY, 1930.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Stock at 2nd February, 1929		113 15 6	By Sales—		
,, Purchases—			Dining Room	5,657 2 0	
Provisions	4,523 5 3		Smoking Room	1,640 8 5	
Tobacco and Cigarettes	615 17 0				7,297 10 5
Minerals	30 11 4		,, Residents' Board		1,699 17 2
		5,169 13 7	,, Special Lunches		227 7 4
,, Gross Profits, carried down		4,094 10 1	,, Stocks in Hand—		
			Provisions	104 0 5	
			Tobacco and Cigarettes	44 0 8	
			Minerals	5 3 2	
					153 4 3
		£9,377 19 2			£9,377 19 2

	£ s. d.	£ s. d.		£ s. d.
To Salaries and Wages		2,260 9 1	By Gross Profit Brought Down	4,094 10 1
,, Commission to Waitresses		60 9 10	,, Interest on Deposit	2 8 5
,, Gas		239 13 5		
,, Electricity		97 17 9		
,, Insurance		20 18 0		
,, Printing and Stationery		56 4 5		
,, Laundry		76 1 8		
,, Repairs		72 14 8		
,, Renewals and Replacements		249 3 1		
,, General Expenses		143 11 6		
,, Uniforms		21 9 11		
,, Depreciation—				
Plant and Machinery	58 2 0			
Fixtures and Fittings	71 14 2			
Linen	6 14 4			
Utensils	11 10 4			
China and Glass	20 11 0			
Cutlery and Plate	20 1 4			
		188 13 2		
,, Preliminary Expenses Written off		40 8 0		
,, Reserve for Income Tax	160 0 0			
Less Amount Refunded	16 12 0			
		143 8 0		
,, Donation— Guy's Hospital Clubs' Union		50 0 0		
,, Reserve Account		209 11 9		
,, Net Profit, carried to Balance Sheet		166 4 3		
		£4,096 18 6		£4,096 18 6

EDS. { J. B. B. / P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *17th May* 1930 — *Number* 1091

PASSIM

AFTER the first flush of enthusiasm following the introduction of radium in the treatment of cancer, there followed a long period, during which optimism in this remarkable new weapon in the treatment of malignant disease gradually changed to disappointment, and many here at Guy's began to feel that in having no radium at our disposal, we were perhaps none the worse off. That the change of opinion from unjustified expectations to equally false pessimism was but the natural swing of the pendulum has, we think, been proved by the results obtained in this hospital since radium first came into general use four months ago.

The bulk of cases so far treated have been epitheliomata of the mouth and carcinomata of the breast, in most cases inoperable.

It is nothing short of marvellous to see, in the case of the tongue, a painful ulcerating growth become painless, and as it melts away, covered by healthy epithelium; or, in the case of a breast, a large fixed mass shrink and soften at a rate which can be appreciated almost daily. Naturally what the ultimate prognosis in these cases is likely to be is still *sub judice*. Further growths situated in inaccessible regions, such as the larynx and palate, have given excellent results in the first instance without the mutilation of the knife.

In view of the fact that radium has only been in use at Guy's for so short a while, the beds set aside for the purpose have been kept very well filled. All the element in our possession is, however, seldom in use at any one time; but as it becomes known to old Guy's men in general practice that radiotherapy is now in full swing, so we may hope to see the full .5 gm. continually in use.

ANOTHER re-shuffle among the Residents has again taken place; another set have gone and into their shoes have stepped a fresh batch back again from holidays. Following upon an unusually quiet three months at the Residents' table, the Going-off Dinner, again held in the "Spit," was also less boisterous than often, the principle of burning one's own smoke, leaving the immediate precincts comparatively undisturbed.

For the ensuing three months Mr. H. Richards has been elected President and Mr. W. D. G. Jones, Vice-President.

FOLLOWING the finish of the session, the Physical Society have made their annual awards: the prize for the best paper to Mr. C. K. Simpson, that for the member who most distinguished himself in the discussions to Mr. P. V. Reading. While the meetings of the past winter were unusually well attended, much of the discussion, we venture, was fruitless and conducted in a spirit of frivolity, we believe, unassociated with meetings of some years ago. Since interest in the Society is steadily growing, its value would be greater if more trouble

were taken in the presentation of cases and less back-chat enjoyed in discussion.

No essays having been entered for the Treasurer's Prize, no award was made. In future years, two additional prizes will be given: the "Beddard Prize" to the member who has most distinguished himself in the demonstration of clinical cases; and the "Laidlaw Prize," to him who shows pathological specimens of greatest interest.

▭

We would draw attention to the continued appeal, in which connection we publish two letters, for money to rebuild the tower of Hempstead Church as a memorial to William Harvey, pioneer of biology and scientific medicine. Whereas nearly £6,000 is necessary for restoration of the Church, not more than £1,000 has as yet been collected. Donations may be sent to Dr. J. A. Ryle, 13, Wimpole Street.

▭

Messrs. Baillière, Tindall & Cox, announce that the price given in their advertisement of Buchanan's "Dissection Guide" in the issue of the 3rd May of *Guy's Hospital Gazette* should have been 10/6, and not 12/6.

Types of Unstable Children

A Clinical Lecture by Dr. R. D. Gillespie

GENTLEMEN,—The type of disorder in children that are brought for treatment to the psychiatrist exhibits both novelty and diversity. The following random selection from a series of children examined at Out-Patients at Guy's illustrates this:

Nervousness, headaches, trembling, talking in sleep, timidity and fear of death, were the troubles of one child; another was said to scratch and bite other children and to be very obstinate; another had headaches, was irritable, cried easily, was very sensitive and reserved; another suffered from nocturnal enuresis and was afraid of being alone in the dark; while still another could not concentrate on his lessons, and repeatedly wandered away from home. More dramatic difficulties were presented by a girl whose mother complained: "She screams for no reason, won't do what I ask, is stubborn, and has violent tempers in which she hammers and bangs. She runs away from me and gets under the bed, and won't play with other girls. She is called Silly Annie and no children will ever play with her, so she now plays by herself. Recently she has wet her bed three or four times. She talks in her sleep and is very restless."

Another girl had distressed her school teacher by emptying the school dustbins at night and strewing the contents on the school steps, by being extremely rough with other children and by her extreme sulkiness. Examples of similar types could be multiplied. For purposes of convenience, they may be classified as follows:

1. Personality deviations: timidity, obstinacy, irritability, sensitiveness, sulkiness, day-dreaming, lack of sociability, emotional, instability, etc.

2. Behaviour disorders: truancy, wandering, temper outbursts, lying, stealing, begging, cruelty, sex misdemeanours, food-fads, refusal of food, etc.

3. Habit disorders: nail biting, thumb-sucking, incontinence, nocturnal and diurnal, stammering, etc.

4. Psychoneuroses: Anxiety-psychoneurosis, phobias, obsessions, compulsions, tics (some).

5. Psychoses: Schizophrenia (dementia præcox), manic-depressive psychosis, etc.

6. Epilepsy:

7. Mental deficiency: dull and backward group, the result of general or localised defect, *e.g.*, word-blindness and word-deafness; feeblemindedness; imbecility; idiocy; temperamental defect ("moral imbecility").

8. Sleep disorders: insomnia, night terrors, somnambulism.

9. Mental disorders occurring with, and probably dependent on, some physical disease, *e.g.*, chorea, epidemic encephalitis, trauma.

Of disorders belonging to these groups (and the same child may exhibit phenomena of several), those listed under behaviour disorders are often, in spite of their ominous appearance, among the least difficult to treat, for the reason that more frequently than the others they result from gross errors in the children's environment. Most of our attention in this lecture will be devoted to them, but something must be said first about several of the other groups.

The term psychoneurosis is often abused in connection with children. One finds the term "anxiety-neurosis" appended when what is really meant is that the child is temperamentally timid. But especially in older children, psychoneurotic disorders very like those of adults are found not uncommonly. It is sometimes very obvious that the psychoneurosis has been engrafted directly by an over-anxious parent, as in the case

of a girl of 12 who was brought to our out-patients by her mother, who said that the child could not eat anything but an occasional piece of sugar-coated cake, in spite of persistent coaxing. Before being referred to psychiatric out-patients, the mother had rushed the child up to the Front Surgery five times, on the last occasion at the child's own urgent request. The history was that six weeks before the girl ate a piece of raw bacon. The mother noticed that the child looked flushed, although she made no sound, but ran suddenly up to her mother. The latter at once put her hand in the child's mouth and pulled out the piece of bacon. The child made no fuss at the time, ate her supper that night and her breakfast next morning. On the following evening she alarmed her mother by complaining of flatulence and by touching her throat. The mother tried to persuade the child to take a drink, but the child would only take tiny sips. The mother stayed up most of the night with her, and kept her from school the next day. From this time on the girl refused to take food, except the cakes already mentioned. But in hospital she ate quite normally in front of the doctor; and when the mother was instructed not to fuss over the child's food any more and both mother and child were reassured that there was nothing physically wrong, the trouble gradually disappeared.

Obsessions and compulsions are not at all uncommon in children. They are of simple form: for example, one of the common obsessive phenomena is the cropping up of a word or a phrase in the middle of saying prayers: the word being usually of an obscene kind. The commonest compulsion is some action designed to counteract a fear. For example, a boy of 11 was found to be doing everything twice. He had to close doors twice, to hang up his hat and take it down again. He was observed when he laid a book upon the table, to take it up again before finally letting it rest. It transpired that he had begun to do this a few weeks before an examination about which he was very apprehensive. He felt that if he did not do everything twice, he could not pass the exam.; but after he had successfully passed, he began to apply the same ceremony to other things, in order as he put it, to avoid bad luck. He had not dared to talk to anyone about his actions and the fears that were at the bottom of them, but after unburdening himself to the doctor he was able to lay them aside. These childish compulsions are so common as to be almost universal. A. A. Milne's lines about "The Lines and the Squares" bears this out. There was another small boy, who, when he was leaving anyone he was fond of, had to look back over his right shoulder and not over his left, lest he bring bad luck upon his friend. Most such fears are dropped spontaneously, the child not mentioning them as a rule to anyone.

Psychoses in the ordinary sense are very rare in childhood. A manic-depressive condition has been recorded as early as the age of five: and so has schizophrenia. I have not myself seen a schizophrenic younger than eleven years of age, and the only supposed psychotic depression that I have had direct acquaintance with in childhood occurred in a girl aged eight, which proved to be a hysterical depression. Of course, when one says that psychoses almost never occur in childhood, one has to define what one means by a psychosis. Notions of a kind which would be regarded as insane by adults are normal in children. This depends on the nature of the child's conception of the world. We all know, and Jean Piaget has lately been emphasising it, that the child's concept of his surroundings is an exceedingly egocentric one. Thus Piaget found that Zurich children up to the age of 8 or 9 all believed, when asked to consider the apparently invariable position of the moon in relation to their own varying position (although not in this language), that the moon followed them about. Similarly children are apt to consider themselves the centre of the universe in relation to other people around them. There was Emily, the heroine of that hair-raising book, "High-Wind in Jamaica," who for a time felt that she must be God himself. And I have known a child who thought that he was perhaps the only real thing in the universe, and that all the rest of it was a kind of stage-play. Concepts like this if entertained by an adult would be regarded either as insane or as philosophical, according to the extent to which they were believed and acted upon.

It is necessary also to remember that the child's criteria for judging reality are fewer and far less adequate than ours. In addition to his lack of experience, he has not reached the stage of systematised "scientific" knowledge: hence fairies and demons of all kinds, *e.g.* ghosts, are quite likely things. The child does not consciously reason; he only thinks, without realising that he does so. For this and other reasons, suggestion plays a large part in his beliefs. With this is linked his extreme imitativeness, conscious and unconscious. Imitation is not merely of actions, but also of attitudes, emotional and otherwise, and it occurs unconsciously more often than consciously. Unconscious imitation of an emotional attitude is specially well seen in the anxious child of an anxious mother. In adult patients with an anxiety psychoneurosis, one of the commonest findings is that the patient's mother had been over solicitous about his health and welfare when he was a child. In this way the

hypochondriacal adult is made ; and in childhood one can often see him in the making. For example a boy was brought to out-patients by his mother, complaining of pains in his head and back ; or more precisely, the boy complained of a pain in his head, and his mother described the pain in his back, of which the boy seemed to know nothing. He wept readily, and was very unhappy, because the other fellows said he was " silly " and could not fight. He was in fact more intelligent than the average, being a year ahead of the normal mental capacity for his age. His mother, who spent much of her time coaxing him to take his meals, had mollycoddled him into being a timid hypochondriac.

That is a crude example of suggestion and unconscious absorption of an anxious attitude. But very often the effect is much less direct and obvious. The child becomes timid in ways not directly suggested. Recently I saw a boy of 13 who was brought by his father and mother because of his behaviour when either of his parents, and especially his father, was out of the home. He would pace restlessly up and down, hoping that his father or mother, as the case might be, had not met with an accident. While waiting for their return he would laugh or cry in a frightened way. His agitation would only cease when they appeared. His father had long taken care to promise to return from his work at a certain hour, and to make a point of returning half an hour before it. Now the Freudian psychologist would surmise a pretty story of an œdipus complex, an unconscious desire for the death of the father, counterbalanced in consciousness for conscience's sake, by a righteous fear of his demise, and with an extension of the fear to the mother by way of compensatory disguise of the unconscious motive for the condition. But two things were observable. The father and mother had twice to leave the boy in another room while they interviewed me in my consulting-room. On both occasions the father went out of the way to tell the boy he would be quite safe and would be back soon ; and he walked backwards out of the room, gazing fondly and apprehensively at his (at the time) comparatively unperturbed offspring. Secondly, although the boy's fearfulness was said to have been present practically since infancy, on the only occasion when he had spent a holiday away from his parents in a Scout's camp, he had exhibited no fear. It seemed therefore that his timidity and his behaviour in this specific direction depended a great deal upon the occasion, and especially upon his father's suggestive attitude. The advice I gave was along the lines that obviously follow from these observations ; namely, to encourage the boy's independence by sending him away from his parents for most of his holidays in the next year or two, and to refrain from reminding him in any way, by word or look, of possible danger to his father's life.

Imitation of specific acts can be more dramatic than this. Such direct imitation is apt to be of people to whom the child would commonly look up (prestige imitation). If the person-to-be-respected departs from a certain standard the results can be disastrous. The mother who pleads headaches and the like to escape difficulties is apt to be followed by her children in this. But sometimes the results are in fact lurid.

A boy of six was brought to the hospital by his mother because of his uncontrollable behaviour. At school he was said to spend most of his time scratching and biting other children, so that he was kept out of the playground. He had always been difficult to manage. As early as two years old, he would try to take his cousins' toys and would go for their eyes if they objected. This became his usual habit whenever he was thwarted. Consequently he had no friends, as no one would play with him, and he was an unwelcome guest in any home. His mother reported that in many ways he was indecent in his behaviour : he masturbated a great deal, and was given to telling her unblushingly all that he had learned from his father. The latter had only recently been sent to hospital on account of so-called " neurasthenia " which had been characterised by bouts of fearful anger, in which he tore his clothes, beat on the door with his fists until he broke the frame, seized a carving knife and threatened his wife with it. He would often take his son up to the lavatory and expose himself, and he was also responsible for imparting much obscene information to him. In such circumstances the child could hardly have avoided being abnormal. It is an interesting fact that when in bed in hospital for some weeks his behaviour showed nothing out of the ordinary.

The corresponding opposite to imitation and suggestion is negativism, which ranges in its manifestations from food-faddiness in response to maternal over-solicitousness, to outbursts of temper. " Stubbornness " is another complaint frequently heard from some parents about their children. Sometimes it is a deep-seated trait of personality ; more often it represents what the patient feels about the child's behaviour when discipline has been consistently faulty.

Thus a mother complained bitterly of the stubborn disobedience of her son aged 14, and of his outbursts of temper, in which he would throw at her a coal shovel or any other handy missile. Investigation of what might be behind this showed that his paternal grandmother lived in the same

house, and that she took sides always with the father against the mother. The grandmother slighted the boy as well as his mother, used to punish him when he was very young to make him cry, and when the mother was absent in hospital, made derogatory remarks to the children about her. In consequence of all this mischief-making, the mother's discipline became completely ineffective. When she asked her eldest son on one occasion to do something for her, he refused, told her to " shut-up " and attacked his mother. Our patient behaved in similar fashion, whenever he was expected to do anything that he did not like.

These are gross examples from life in poor and crowded homes: but similar though subtler influences account for similar behaviour in children of all classes.

Another point about the child-mind that is worth remarking is that its as yet unfettered egotism involves a desire for power and possession which does not always hesitate to wish opponents out of the way. Death does not mean very much to a child. It only means at the most that the person concerned is no longer there, and is decisively got rid of; so that when anyone interferes with the fulfilment of some childish desire, the child may cordially wish the interfering person dead. He may sometimes say so, although when he actually says it an element of bravado has entered. Far more often he cherishes the wish in his heart and says nothing about it. This accounts in part for some of the violence that one encounters in the temper-tantrums of children.

A girl of 10 had been for four years away from home in a special hospital and school on account of a tuberculous ankle. Finally with her limb in an iron apparatus, she was allowed home, where a stepfather had been installed since her departure. Towards the latter she almost at once exhibited violent antagonism. She tried to hurt him at every opportunity, and recently had kicked him with her leg-iron and inflicted a deep wound. She destroyed a stuffed bird of his, and besmirched some of his papers. It was considered with much probability that she was trading on her invalidism, and taking advantage of the relaxation of discipline in her favour; for the family was very kind to her, and the stepfather indulgent.

Such murderous wishes are generally towards those in authority, but they may also be directed towards the child's peers on account of jealousy. It is no infrequent experience to find that a period of abnormal behaviour began in a child soon after a younger child was born and supplanted it in the family affections. But it can also be shown, of course, between children who are contemporaries.

Lest this catalogue seem too damnatory, let me say that the " bad " children make up a very small proportion of the whole; and that very often it happens that in the case of a child who has been labelled bad, close investigation shows another example of the principle of giving a dog a bad name and hanging him. Even those who are definitely guilty of constant misbehaviour have usually been driven into it by faulty example or lack of discipline. As an example of how a child may be given a bad reputation and made to suffer for it, there occurs to me the instance of a girl who was said to be a sexual pervert, and had been refused any kind of recognition at school, although clever and capable enough to be a prefect. This had the result of making the girl sulky and depressed. It was based on the report that two years previously she had brought an indecent postcard into the classroom and others had been found in her possession. Closer investigation showed that the evidence was very doubtful: and that in any case she had never misbehaved in that way before or since.

One hears melodramatic accounts of adults who are driven into crime, but it is not realised that similar factors operate in children to produce similar effects. Faulty discipline produces instances like the following, where rebellion against too much restraint, and the frustration of the possessive instinct, as well as the longing for prestige, all played a part.

A boy of 13 was brought to see me by his mother, who was in great distress. He was the eldest child and only boy in the family, and had been the apple of his parents' eye, but two years previously he had begun to steal anything of value he could find about the house. He stole his mother's money, his father's cigars and his sister's sweets. He was incorrigible: no punishment was of any avail. This hardened young delinquent, when interviewed, rapidly dissolved into tears. It came out bit by bit that after day-school, which ended about 4 o'clock, he was expected by his mother to do two hours lessons; thereafter to practise the violin (which he loathed) for half-an-hour, and after that to help his mother in the garden. If any leisure remained before bedtime, he was allowed to play with his sister in the garden: the village boys were " too rough." Nominally he had ample pocket-money for one of his years—8d. per week; but 4d. of this he gave (under duress) to Foreign Missions, and the other 4d. he placed in his bank against the purchase of Christmas and birthday presents for the rest of the family.

Rebellion against parental and other disciplinary influence find expression also in truancy. We had recently at out-patients a good example of the

complicated mental process that may produce an apparently simple case of truancy.

The father of the boy in question presented us with a careful account of his history, which he had written out. This was unusual enough, but the style of it was still more unusual. The account contained such phases as " bar-sinister much in evidence "—referring to the history of the mother's family. It was noticed also that he called the boy by the name of Kant. When he was asked why, the father (whose surname was, shall we say, Brown) was mildly indignant, and inquired, why shouldn't he ? But he then vouchsafed that his boy's mother called him Immanuel, so that his total equipment in names was Immanuel Kant Brown (or at any rate, a name constructed on these principles). The explanation given by his father was that he happened to be " rather interested " in the philosophy of Kant at the time the boy was born. Here lay the clue to the boy's truancy ; his father had had great aspirations for him, and the boy, who was but an average scholar, could produce only moderate reports from school. The father let him understand that his achievements were very disappointing ; the boy felt this keenly and school became so distasteful in consequence that he played truant repeatedly.

Lying seldom appears as a primary disorder, but it commonly appears secondarily as a defence for some previous act such as stealing. When it appears primarily, it usually takes the form of bragging, as in a feebleminded boy who sought various menial employments and having obtained a job, began to boast that his father, who was a journeyman tailor or something of that sort, had an income of £1,200 a year. When I saw him, he professed to have won a prize as the inventor of a well-known advertisement for Bovril. This was a myth likewise. The motive, to increase prestige, is obvious enough.

It will be clear from the examples I have cited that disorder of behaviour in children is commonly the result of the clash of childish tendencies and interests with an unwise environment, the environment being personal and usually consisting principally of the parents. The other chief environmental influences are brothers and sisters, grandparents, school authorities and companions. The child's tendencies are usually normal in themselves, but by misdirection acquire imitative outlets. In a certain proportion of cases the tendencies are themselves the result of mental disease or defect—the various degrees of congenital or acquired mental deficiency, in the technical sense, in which the child possesses much less than the average intelligence for his years, or much less than the average emotional control. Apart from the usual forms of mental deficiency, there are the instances of abnormal behaviour without conspicuous defect of intelligence which are the result of epidemic encephalitis, or still more rarely of brain-injury. Instances of abnormal behaviour dependent on the latter cause are much more difficult to mend than such psychologically and environmentally determined abnormalities as have been described above. A common error recently is to diagnose as post-encephalitics, on slender historical evidences, any decided disorder of behaviour in a child which proves difficult to alter. Such a diagnosis should never be made in the absence of neurological signs (which are often absent) unless there is a very definite probability of an attack having occurred, and unless an exploration of other factors has proved negative, or if not negative, unless the continued modification of these factors produces little or no effect. Similarly a history of head injury should be inspected with the greatest care. Brain injury is rarely a cause for persistent abnormality of behaviour, as far as we know ; but it is a favourite theory put forward by parents. It appears to them as an honourable if fatalistic excuse, and also because they cannot at first understand how any other explanation is possible.

So far we have considered principally the grosser forms of behaviour disturbances and some of their causes. What I have called personality-deviations are much more obscure in origin, and more difficult to treat. Some of them are doubtless largely congenital and imparted, but are nevertheless modifiable to some extent. An example of the more definitely acquired type of inconvenient personal characteristics was furnished by a girl of 13. She was said to have been very sensitive and reserved for some years. She complained of headaches, was irritable and cried easily. Since the age of 10, when menstruation began, she had become fat. She was the eldest of four children, the two youngest being boys who teased the patient unmercifully. The latter tried to discipline them, but being given no standing in the home in regard to them, she merely brought further ridicule on herself. The patient went in considerable awe of her father, who was a robust man and despised weakness of any kind, physical or moral. Consequently the girl felt that she was " odd man out " at home. Her precocious physical developments had also made her sensitive with regard to her appearance.

Treatment, which proved very reasonably effective, consisted in encouraging her to join a troop of Girl Guides, in advising her how better to get on with her brothers, and in assuring her that in a few years, her physical development would be normal for her age. Since she was one year back-

ward at school, she was encouraged to devote herself more to practical and domestic work of which she was fond. She is now already much happier and less sensitive.

There is no time to give further examples of the various types of complaints found among so-called "difficult" children. But enough has been said to indicate that certain lines of investigation must be systematically followed before a rational treatment can be recommended.

These methods are as follows :—

(1) The exact ascertainment of their "complaints," both from the child's and from the parents viewpoint.

(2) A physical examination of the child. Conditions like tonsils and adenoids and constipation, for example, are traditionally associated with a variety of "nervous" manifestations in children, including bed-wetting, disturbed sleep, headaches, and the like. Where no physical disease can be discovered, it is important not to forget (3) the child's psychophysical constitution. This is of special importance in the overactive child so well described by Cameron, and Osman's conception of glycopenia and has here a very useful and striking application. In children of this type, it can be very gratifying to watch the response of such symptoms as night-terrors, disturbed sleep, neurotic vomiting of the anticipatory type, and peevishness, to the administration of glucose, with which bromide can sometimes be beneficially combined, especially in sleep disturbances.

(4) A mental examination, with special reference to the question of the presence of deficiency, general or local, is essential. The presence of any degree of intellectual or temperamental defect not only may be largely responsible for the child's reacting with certain symptoms, but has an important bearing on the prognosis and treatment. This mental examination is best done by someone specially trained in the tests employed, as the results are otherwise apt to mislead. In the absence of such facilities, a good deal of information may be gleaned from the position of the child in school in relation to his age ; but in that case, one must ascertain that the child has not been pushed on simply on account of his age, or for other considerations extrinsic to his intelligence. Unless the school attainments are clearly average or above it, it is better to have a definite estimate made of the child's intelligence by the Binet-Simon and other tests. The possible fallacies produced by unsuspected local defects such as congenital word blindness or deafness, must also be borne in mind.

(5) Careful inquiry, personal, economic, residential, etc., into the home circumstances, especially into the character, temperament and attitude of the parents is essential.

(6) The behaviour at school and the opinion held there of the child are useful indicators. Especially important is the fact that frequently the accounts from school and home do not tally. Either the child is a little demon at home and an angel at school, or vice versa—more often the former. It thus becomes clear that the fault is not primarily with the child. It seldom is.

Nationalised : A Nightmare

AS a distinguished stranger, I was treated with courtesy by the government of Novanglia. A hoary Professor of Medical History accompanied me to the Government Hospital, which I was anxious to see, as I had heard it was a hundred years in advance of our English system. The building bore a curious resemblance to Guy's, but was whitewashed and rather depressingly neat. As we entered the Quadrangle the professor said, "Of course, this used to be a Voluntary Hospital, as we quaintly phrased it, until Medicine joined the Telephone Service and the Post Office and the Milk Supply as a Government monoply. I think you will agree that we have altered for the better."

By now we were in the colonnade, and I saw a large notice : Secretariat only ; no smoking or noise ; Patents and Staff go to side door in Baize Pond. "This," said the professor proudly, "used to be called the surgical block ; now it houses the accountancy and statistical departments ; second to none in the country." Through half-open windows I saw hundreds of typists and heard their industrious rattle. Stepping into the park the professor waved his hand in the direction of what corresponded to our Medical Block. "The Research Department," he announced. I gazed respectfully at the huge building and murmured "This is an advance indeed ; why, you must have three hundred research beds." "Not beds, desks," he corrected me ; "all our research is done by examining the statistics evolved in the old surgical block, and there is nothing we don't research into. For instance, the chief clerk has just conducted an examination of the incidence of onychogryphosis in hop-pickers."

"But have you no clinical research ?" I asked. "Dear me, no" he muttered, reproachfully, "it

was forbidden fifty years ago by the Vivisection Act." As I goggled at this, he went on "I see I must explain the situation. You see, nearly a hundred years ago, shortly after the first Labour government came into power, the political parties found themselves in agreement about everything; they cast around for a fresh subject to disagree about, and medicine was netted. When elections came, Conservative candidates no longer promised sixpence off the income-tax, but shouted 'Free medicine for all.' This was fiercely opposed by the Labour party as benefiting the middle classes at the expense of the poor. After some years a Conservative government passed a bill to nationalise the hospitals. Labour, though unwilling, was forced by its oft-stated principles to agree, but the left wing violently protested that now the workers would not only pay for the rich man's pleasure, but for his pains also. The medical profession fought a losing battle, asserting that medicine, in an atmosphere of red tape, would wither. But they were wrong, as is shown by the record number of medical blue books issued last year. Specialists were given salaries equivalent to those of the highest paid civil servants, and general practitioners were forced to be nationalised or starve, when, a year later, National Health Insurance became universal and compulsory. The Ministry of Health became so important that the Prime Minister himself usually takes its portfolio."

"But," I said, somewhat dazed, "We were talking of Clinical Research." "I am coming to that," he reproved me. "The Labour party, its thunder stolen by its adversaries, looked round for a fresh cause to support. The choice, by a masterstroke of subtlety, fell on vivisection. Labour candidates stormed the country with vicious stories of animals maimed by sadistic researchers, and thousands of very wealthy old ladies, Conservatives by immemorial tradition, joined the Labour Party. That is why Labour is now so Conservative. But one enthusiastic Red went a step further, and agreed, with some show of logic, that if it was immoral to try new drugs and methods on animals, how much more immoral was it to try them on our fellow beings. Then arose a great cry, 'No Human Vivisection,' which stirred the country as nothing had done since the Suffragettes of a hundred and twenty years ago. On regaining power Labour passed an Act that no drug should be used on patients whose effect on man was not already known, and that is why all research is now done by statistics."

"But what do the physicians say?" I questioned.

"They are not asked," said the professor. "If any physician exceeds his Governmental status by attempting research, he is instantly dismissed the service." "But how are the sick treated?" I asked. The professor beamed, "We have done away with the dirty old Front Surgery and now have a splendid inquiry bureau where patients' ailments are sorted by trained clerks before the patients are sent to the appropriate specialist." ("Shades of Miss Webb!" I murmured.) "Of course, there are no general physicians now, but it must be a poor disease that cannot find a home with our cardiologist, our psychiatrist, our Borough bronchitologist or one of his fellows. We are very proud of our senior surgeon, Sir Bumpity Podge; he has now given his celebrated lecture on prepatellar bursitis for thirty-eight successive years, and has never been late for an operation. I venture to think that none of the so-called surgeons of the Voluntary period a hundred years ago can equal that record, and in recognition of it his colleagues of the surgical indexing department intend to present him with a silver salver suitably inscribed."

"But where are the wards?" I asked. He waved his hand, "There are a few beds in the old Annexe," he answered, "but we're badly needing space to expand. The drug pricing department, you see—."

"Who are those very weedy youths?" I interjected, as two visceroptotic young men lay down on the grass. "Oh, medical students;". said the professor, "they do say we're not attracting the best type of young man. Yet I think we give them every inducement, eh? What do you say?"

But that is better unprinted.

S. A.

Notice

Musical and Dramatic Entertainment

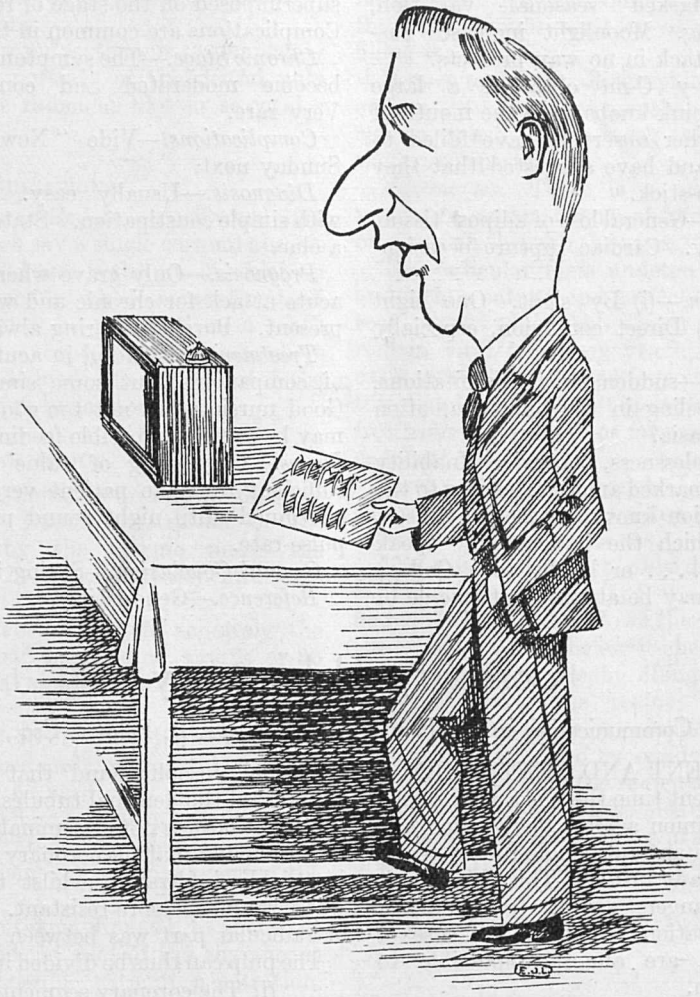
It is many years since the stage of the Physiological Theatre was occupied by a caste purely feminine in composition, whatever may have been the opinion of the audience in February last. Such a performance has, however, been arranged for the last week of this month.

The entertainment will be presented on Tuesday and Wednesday, May 27th and 28th, at 8 p.m. each evening, by kind permission of the Dean and Professor Pembrey.

The artistes include Lady Maud Warrender, Miss Van Dresser, Miss M. Clarke, L.R.A.M., and members of the nursing and massage staff.

All the proceeds will be devoted to the College of Nursing Endowment Fund. Reserved seats (price 2*s.* 6*d.* and 1*s.* 3*d.*) may be booked by application to Sister Taylor, Miss Evans, Massage Dept., and Mr. W. M. Bigby, The College. Unreserved seats will be available in the gallery for 6d., payable at the door.

"COMBINED ROUND"—CASE II



G. M.—A Pulmonary Perplexity

Clinical Case of No Interest

Amor Vulgaris

A SPECIFIC infectious disease characterised by cardio-vascular instability and mental changes.

Etiology.—Susceptibility practically universal, but infants immune. Hot neighbourhoods especially affected. Marked seasonal variation, maximum in Spring. Moonlight increases susceptibility. One attack in no way protects.

Bacteriology.—L-r-y C-nn obtained a large green bacillus with pink knobs from the mouth of a fatal case, but other observers have failed to confirm the knobs and have suggested that they were particles of lip-stick.

Morbid Anatomy.—General loss of adipose tissue. Cardiac hypertrophy. Cardiac rupture occasionally.

Mode of Infection.—(i) By sight. One sight often sufficient. (ii) Direct contagion, especially at dances, etc.

Symptoms.—Onset—sudden with palpitations, flushings, sinking feeling in the abdomen, often complete motor aphasia.

Acute stage.—Sleeplessness, anorexia. Inability to concentrate,with marked amnesia, leading to the characteristic condition known as the jimjams, a dreamy state in which the patient may speak harshly to Mr. Tho. . . . or kindly to a College waitress and there may be attempts at suicide or even poetry. Death may occur from cardiac rupture, starvation, suicide or murder. Usually symptoms gradually subside and recovery is complete in from 1 to 3 months. In the highly susceptible the onset of a second attack may be superimposed on the stage of recovery of the first. Complications are common in this type.

Chronic Stage.—The symptoms of the acute stage become moderated and continue indefinitely. Very rare.

Complications.—Vide "News of the World." Sunday next.

Diagnosis.—Usually easy. May be confused with simple constipation. State of bowels will give a clue.

Prognosis.—Only grave where patient mistakes acute attack for chronic and where complications present. Purchase of ring always serious.

Treatment.—Isolation in acute stage in interest of companions, but some simple task essential. Good nursing, but not too good, or complications may be severe. Forcible feeding may be required.

Drugs.—Only drug of value is alcohol. Dose sufficient to make patient very nicely and drug continued until night round produces no rise of pulse-rate.

General Conclusion.—Spring is the devil.

Reference.—Genesis ii, 18. E. C-J.

Coronary Pulpectomy

A Casual Communication to the Dental Society by G. B. Palmer, Esq., L.D.S.

MR. PRESIDENT AND GENTLEMEN.—At the present time there is a very strong body of opinion against devitalising any teeth other than the anterior single-rooted teeth, and this only if the lady insists. This objection is founded on the dangers arising from present methods of devitalisation, which, in the case of upper molar teeth, are almost impossible to satisfactorily perform.

The method that I propose to outline this evening—that of Coronary Pulpectomy—is not new. It has not been advocated much in this country, though in Paris and elsewhere several dental surgeons have been practising it for some time. Recently Professor Hess in Switzerland and several American surgeons have been advocating similar measures.

Let us first consider a few anatomical and physiological properties of the dental pulp—especially in the pulp of multi-rooted teeth.

Mendel Joseph found that when caries had penetrated the dentinal tubules as far as the pulp, the infection was not disseminated equally through it. He found that the coronary portion was almost invariably infiltrated, whilst the apical portion was very much more resistant. The intermediate or radicular part was between the two extremes.

The pulp can thus be divided into three parts—

(i) The coronary segment ;

(ii) Intermediate or radicular segment ;

(iii) Apical segment.

The last two portions will be hereafter referred to as the "radicular filet."

The effect of arsenic on the pulp was also found to correspond to that of microbic infiltration, indeed it is common knowledge—and painful experience—that the passage of a barbed broach down an arsenically treated pulp canal can be quite unpleasant.

Furthermore, from clinical observation you know that stimulation of the coronary segment results in a very severe paroxysm of pain which may persist for some time, whereas stimulation of the radicular filet results in a mere transient twinge which passes as soon as the stimulation ceases.

This differentiation between radicular filet and coronary segment is best marked in the molar teeth, and to a lesser degree in the pre-molars. Any procedure based on this differentiation should be confined to the molars.

The aim of coronary pulpectomy is to completely excise the coronary portions of the dental pulp whilst preserving the radicular filet in as vital a state as possible.

Indications.

It should only be practised on a tooth when pulp is vital, or one in which say a single cornual abscess has formed. The ideal case is the one in which an exposure has been made when excavating soft caries. It should never be practised on a tooth other than a molar, except in rare cases where X-rays show a well-defined differentiation of the pulp chambers of a pre-molar tooth.

Technique.

Either a local anæsthetic or an arsenic dressing may be employed. Rapid penetration of the coronary segment by the arsenic limits the hæmorrhage, which if severe, greatly interferes with the operation.

In practice, however, it is safe to apply the arsenic for only a very short period, say 24 or 36 hours, and give a local as well, before commencing the operation.

Rigid asepsis must be observed if the radicular filets are to be preserved undamaged, and so strong antiseptics must not be used.

First fix the rubber-dam. The pulp having been anæsthetised or infiltrated with arsenic, as much caries as possible is removed without opening the pulp chamber.

A fresh burr is then taken, dipped into phenol or spirit and flamed, and the roof of the chamber is removed as far as possible without penetration.

This burr is changed for a sterile No. 7 or 9 rosehead and the mass of pulp removed.

The pulp débris is removed by means of repeated lavage with cotton wool tampons, soaked in a solution H_2O_2, and any traces of coronary segment of the pulp removed by running a fine rosehead burr into the mouth of each root canal.

The cavity is again washed out with H_2O_2 and a tampon soaked in this is left in for a fewmoments. The cavity is next wiped round with Sp. Vini. Rect., and dried with warm air. A tampon containing a little alcoholic solution of thymol is left in and the cavity is sealed for from one to eight days.

On the next appointment a glass slab is flamed and the following paste prepared as thick as can be conveniently worked—

R	Zin. Oxide - -	5 portions.
	Aristol - - -	1 part.
	Eugenol - - -	q.s.

The spatula should preferably be sterilised just before use. The compound is lightly pressed into the pulp chamber and an oxyphosphate cement filling inserted.

If no symptoms, radiographic as well as clinical, are present after three months, a permanent filling can be inserted, care being taken not to disturb the aristol paste.

Advantages. There is a minimum of instrumentation, and no chance of forcing either infection or a broach through the apex.

The radicular filets undergo a gradual fibrosis, and form a natural and perfect aseptic plug for the root canal, whilst the apical portions probably remain vital for many years. Dr. Roy* quotes cases vital, when opened four years after a pulpectomy, and he claims that molar teeth have remained free from any symptoms for over twenty years, an excellent result.

Two teeth, upon which I had performed a coronary pulpectomy are free of any symptoms after nearly twelve months.

The aristol paste probably does not come into contact with the radicular filet, as much force would be required to force it down the narrow openings of the canals. Nevertheless it checks ingress of any bacteria through a leaky filling.

By obviating the tedious and not always satisfactory methods of complete extirpation and filling the canals; and by avoidance of mummification and cauterising the radicular filet, the method of pulpectomy seems fully justified and worthy of trial, especially if one bears in mind that the loss of a single 1st molar reduces masticating efficiency by 25 per cent.

* Maurice Roy, L'Odontologie, Dec., 1928.

Notice

The Innominate Club Dinner

The Annual Dinner of the '21 Innominate Club will be held at the Trocadero Restaurant, at 7.30 p.m., on Friday, June 6th. Tickets, price 12*s.* 6*d.*

Will all those who wish to attend please send in their names to :

G. T. HANKEY,
23, Gloucester Gardens, W.2.

Dental Partnerships

HAVING been consulted from time to time about partnerships, and how they are usually arranged, a short article upon the subject may perhaps not come amiss to some of the readers of the *Gazette*.

First, the intended partner should, if possible, serve as an assistant in the practice for a year, or more, or failing that, at any rate, for a few months, in order to judge whether a partnership would be likely to prove mutually advantageous. It is advisable for each party to employ a solicitor, and to consider and agree upon every conceivable contingency.

As showing the necessity of taking such a course the following cases are known to the writer:—(*a*) A partner, invalided, drew his share for many years without doing any work, no proviso having been made for ill-health; (*b*) A partner, married, having served in the practice for about two years, met with an accident at play, which precluded him from ever again following his profession; (*c*) A partner served as a combatant during a part of the Great War, receiving in that period his share of the profits. Upon demobilization he refused to continue his contract, or follow dentistry, and claimed, and received, a large sum as his share of the goodwill of the practice.

The duration of a partnership may be for 7 or 10 years, and the agreement renewed for further periods if desired.

Upon dissolution of the partnership each partner is free to practise anywhere, unless otherwise agreed upon.

The amount an incoming partner should pay for entering an established practice is a two years' net income, based upon the average of the profits of the three previous years, as certified by a professional accountant. For example—supposing the net profits yielded £3,000 annually, and the practitioner sold one-third share (£1,000 per year), then the purchaser would pay £2,000 (two years' net profits), say, £1,000 upon joining, and £500 at the end of the first and second years respectively.

A share of a first-rate west-end practice was sold upon the basis of nearly a three years' net profit.

Each partner would possess his own instruments, but the share of the furniture and workroom equipment must be paid for as to one-third by the incoming partner.

The payments to be made before showing any profits are:—rent, rates, gas, electric light, mechanics' and doorkeeper's wages, material, telephone renewals, repairs, fuel, anæsthetists, accountant, miscellaneous (postage, stationery, papers, drugs, etc.), and possibly a secretary's salary.

Some such clauses as the following are necessary:—

1. Should either partner from illness, accident or any other cause whatever absent himself in any one year from the 1st January to the 31st December for more than 21 days, irrespective of the annual holiday, then in that case the other partner may employ a locum tenens, charging the cost to the absent partner.

2. Should either partner from illness, accident, or any other cause whatever absent himself for six months in any one year, then in that case the partnership becomes terminated.

Other terms of partnership are known to the writer: A practitioner of standing paid his partner a fixed sum per year for his work up to a total of £.... and a percentage, 25 per cent. (? 50 per cent.) above that amount.

Two practitioners agreed that all business expenses should be shared in proportion to their gross returns. They carried on their practices separately, and supposing one practitioner earned £2,000 gross and the other £1,000, then the former paid two thirds and the latter one third of the business expenses.

In the event of the death of the senior partner the junior may continue to practise on his own account, or purchase the senior's share from the executors. In the event of the death of the junior partner, the senior pays to the executors an agreed sum. A partnership is dissolved by the death, or bankruptcy of either partner. Should the junior partner desire, and the senior be willing to sell, a larger share in the practice, then it shall be purchaseable on the original lines of the partnership. Each partner shall give his whole time to the partnership and not engage in any other profession or business.

The hours of practice, and the length of the annual holiday should be defined. A joint banking current account should be opened, each partner paying into it say £50, as the minimum balance, and each allowed to sign cheques. All fees to be paid into the joint account. All partnership debts having been paid, a balance should be struck on each of the usual quarter-days of the year, and the partners thereupon draw their respective shares of the net profits. Books of account should be kept and annual balance sheets drawn up. In partnership deeds there is usually a clause that in case of dispute the matter be dealt with by arbitration. The writer, ignorant of law, would be satisfied by each partner belonging to a Medical Defence Society, who would settle any dispute. A well-thought-out equable partnership is advantageous, but a one-sided agreement sooner or later leads to trouble.

W. A. N.

Correspondence

William Harvey

To the Editor of the GAZETTE

SIR,—I gather the appeal made in "Guy's Gazette" and the Press on behalf of a memorial to Harvey at Hempstead Church—to restore the tower—has not met with the response which is essential. This is very regrettable for several reasons.

The discovery of the circulation of the blood was a world epoch in medical science, and Harvey lived in the land of our birth. But Harvey, if I may say so, was not a mere medical man, he possessed a liberal education like all good physicians, and we see him in the attractive light of one versed in the classics and reading Virgil. Then it is fitting that Harvey should be associated with Hempstead Church in Essex, for when all is said the churches are still the historic appeal in our landscapes. But we cannot permit our medical brethren of the English-speaking race to come across and pay a pilgrimage, as it is.

I am confident Guy's men will not be found wanting. Busily as they may be engaged, now it is placed before them (inadequately I know), they will send their subscriptions.

Yours, etc.,
RICHARD GILLBARD.

SIR,—Herewith the subscription list to date for the Harvey Memorial Fund. I daresay you will have seen recent reiterations in the *Times* of the appeal. The sum collected is still far short of that required. I hope, therefore, that Guy's may still be able to swell the sum a little further. I enclose copies of the appeal which you might perhaps have distributed from the Gazette Office to the Library and College or elsewhere.

Yours, etc.,
13, Wimpole Street, W.1. J. A. RYLE.

	£	s.	d.
Dr. H. W. Barber	2	2	0
Mr. Lancelot Bromley	2	2	0
Dr. H. C. Cameron	1	1	0
Dr. J. J. Conybeare	1	0	0
Mr. B. Davies-Colley	1	1	0
Professor Donaldson	2	2	0
Dr. A. H. Douthwaite	2	2	0
Mr. N. L. Eckhoff and Members of the Physical Society	2	0	0
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Dr. C. P. Symonds	1	1	0
Mr. W. H. Trethowan	1	1	0
Mr. Philip Turner	1	0	0
	£37	10	6

(Subscriptions should be sent to Dr. J. A. Ryle at the above address.—ED.)

Sea Chirurgery

To he Editor of the GAZETTE

SIR,—The precarious living afforded to one who tries to live up to the highest ideals of the profession, leaves but little for the luxuries of life, but, perhaps, the purchase of books can hardly be termed a luxury. Once safely on our shelves, they are a joy for ever and trusty companions for the few hours of ease that may fall to our lot. It is amazing how one's books accumulate, despite the predatory tendencies of our friends. My scanty shelves have long been filled, and some hundreds of volumes lie on the floor. Personally I specialise in old medical books, and I never can resist purchasing one of these curious works which so eloquently describe the poor state of knowledge that existed up to comparatively recent times.

To me the value of old books is always enhanced when they have been annotated by their previous owners, and more especially is this the case when the volumes treat of the profession one practises. It seems to bring me into direct contact with a physician or surgeon of old, who was confronted with the same problems which we have to face at the present day. I was pleased, therefore, to purchase a few months ago a little volume entitled "An Abstract of Sea Chirurgery," written by one John Moyle, sometime a naval surgeon in His Majesty's service. It was printed in 1686, at the sign of the Three Bibles on London Bridge.

The learned author evidently carefully considered the social position of his patient before prescribing any treatment. He says: "The common shipmen can be treated with large and loathsome boluses, while the persons of quality can take small and pleasant doses or even a few drops of some noble essence, drunk in a glass of choicest wine which

would invite even a child to take it"! It is apparent that Master Moyle had learnt very little of the equality of man during the great days of Cromwell.

Before going into action at sea, the author invites his pupils to have everything ready for serious operations. He tells them to set out a bench for the wounded men to sit on while he performs operations; and they are on no account to forget to have a tub filled with water into which amputated limbs can be thrown.

There seems to have been considerable difficulty with illumination in the cockpit, as a well-directed shot might quite well knock down an oil lamp and thus threaten the safety of the ship; so he advises that candles should be used. One prescription which is ordered before every operation, would meet with the approval of even modern sailors—he directs that "a dram of cordial be given to the patient to keep up his spirits." In view of what follows it was, doubtless, needed.

Amputation seems to have been resorted to after even the most trivial injuries, and Master Moyle states that "your main design must be to save the man's life, and not to worry so much about the limb." Having restrained the bleeding with a ligature, he gives orders for the muscles round the bones to be divided with two even strokes. At this moment he warns you that although "you will now hear sad shrieking" you must let nothing daunt you but that you must be resolute and complete the operation as quickly as you can.

What an interesting page of history John Moyle must have seen! Born perhaps, in the latter years of the reign of James I, he may have stood in the crowd and watched the execution of Laud and the stern and relentless Wentworth. With his knowledge of surgery he may have seen service with Charles at Edgehill and attended wounded royalists at the battle of Naseby.

Possibly he served with Blake and his vivid description of the horrors of the cockpit may have been gained by actual experience after a brush with the broom-masted ships of Van Tromp or de Ruyter.

The book was apparently purchased by one John Wagstaffe in 1688. This was a fateful year in England. Perhaps the owner bought it on the day when London was ablaze with joy at the acquittal of the Seven Bishops, or a little later in the same year, when he would have had to push his way through the crowd, watching the weathercock on Bow Church for signs of a Protestant wind to waft Dutch William to our shores.

Yours, etc.,
ERNEST GRIFFIN.

48, Upper Berkeley Street,
Portman Square, W.1.

The Beddard Fund

SIR,—The above was collected with the help of Mr. Baird and Mr. Clifton, and has been invested by the Governors of the Hospital on behalf of the Pupils' Physical Society. The interest is to be given as an Annual Prize to the Member who shows the best series of Clinical Cases at the Meetings of the Society.

Yours, etc.,
E. C. WARNER.

	£	s.	d.
M. McC. Baird, Esq.	2	0	0
Dr. H. W. Barber	5	5	0
L. R. B. Birt, Esq.	1	1	0
Dr. J. M. H. Campbell	2	2	0
L. W. Cann, Esq.	2	2	0
R. J. Cann, Esq.	1	1	0
E. T. Clifton, Esq.	1	0	0
Dr. J. J. Conybeare	5	5	0
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O. Plowright, Esq.	1	1	0
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A. R. Thompson, Esq.	3	3	0
S. R. Trick, Esq.	1	1	0
E. C. Warner, Esq.	3	3	0
F. S. Warner, Esq.	1	1	0
A. Wills, Esq.	2	0	0
Interest from Bank	3	11	11
Total	93	15	11
Solicitor's Expenses	2	2	0
	91	13	11

Sport

The Boat Club

ON March 26th, the 2nd VIII rowed from Harrods to the University Stone and were beaten by the Royal College of Science 1st VIII by three lengths.

This race was a friendly affair and although Guy's were not in full-training, enabled the captain to pick a crew for the Head of the River Race, which was rowed over the University Course (4½ miles), on March 29th.

The crew were in strict training for three weeks, and were coached for the last two weeks by Mr. K. S. Keele. They are indebted to Mr. Keele for his patience and his almost apologetic manner, when he had to contend with a bicycle too small for him and the fact that the crew were always in semi-darkness, as it was impossible to get afloat before 5.30 p.m.

A great deal of criticism is often levelled against rowing men, and it is a pity that more cannot find time to come and support the only Hospital which entered a crew for this exacting race.

On March 26th, a trial course was rowed from Mortlake to Putney against Trinity College, Dublin, on a moderate tide, and two members of the Hospital followed in the launch.

Owing to the engine of the launch stopping, the umpire gave Trinity half a length start; both boats remained level to Barnes Bridge, after which Trinity gained till they were one-and-a-half lengths up at Chiswick Promenade, when Guy's closed the gap to a length. After this, although stroke repeatedly spurted, Trinity increased their lead to six lengths; in Putney Reach stroke again tried to reduce the gap, but the crew at this stage were using their arms instead of their legs.

Trinity finished in the time of 20 minutes 50 seconds, and Guy's in 21 minutes 39½ seconds.

On March 29th, the crew started well in the Head of the River Race, striking 36 in the first minute and 32 along Chiswick Promenade; at Hammersmith Bridge the crew were still well together and striking 34. Here a cross-wind was met and the crew behind (Auriol B.C.) began to gain, due to superior watermanship. The crew got short and began to use their arms, which never pays in a long course; the rate of striking now fell to 28. At the Mile Post stroke rowed magnificently and the crew began to use their legs again, the rate of striking went up, but unfortunately stroke had killed himself in his effort; he must learn to drive his crew and at the same time keep enough in himself to row the boat home at the end of a race. The crew were rowed right out at the finish in the time of 21 minutes 20 seconds. This was 8 seconds better than last year and 19½ seconds better than the trial.

Rowing in the Sandwich Division the crew kept its position, but did not gain a place in the 1st Division.

Mr. Keele has written the following characters of each member of the crew :—

Stroke : R. J. Wheatley, supplied great keenness. He is inclined to stiffness, especially over the stretcher, and this sometimes results in short length and a tendency to be late on himself. Can be relied on to drive his crew to the bitter end.

7. G. G. Ellis, the most finished oar in the boat, and a patient and persistent organiser.

6. J. M. Lea, also an experienced oarsman. He appears slightly inclined to row the stroke in two pieces, thereby producing either a wash-out or an entangled and uncomfortable finish.

5. G. A. Dingemans, an extremely hard worker who has constantly to contend with a physique unsuited to rowing. A relative shortness of body length makes really effective work behind the rigger a difficult achievement for him.

4. W. J. Wheatley, in build and style very similar to stroke, and inclined to a stiffness forward which makes him late when paddling. This fault largely disappears in rowing, when he does a tremendous amount of work.

3. G. M. Curtois, a hard worker, and also the most natural oar in the boat, who should be an asset in the future, especially if he increases in weight and strength, which access of years should do much to supply.

2. G. A. Miller, does a great deal of effective work for a light man, and improved greatly in practice. Appears inclined to swing too far back without actual increase in length in the water.

Bow : J. B. Spearman, a fair waterman, who filled a difficult position with credit, and gradually attained more length forward, in spite of a general tendency to shortness throughout the boat.

Cox : J. A. Forster, keen and usually sound, still seems to a predilection for sudden use of the rudder not wholly between strokes.

Hospital Information, etc.

Pass List

UNIVERSITY OF CAMBRIDGE.

SECOND EXAM. FOR MEDICAL AND SURGICAL DEGREES

Easter, 1930.

L. I. S. Campbell.

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY.

April, 1930.

PART I.

M. Mitman

MASTER OF ARTS

T. O. Garland

BACHELOR OF SURGERY.

T. O. Garland.

CONJOINT BOARD

April, 1930.

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R. N. C. Smith
K. Biden Steele

Medicine.

A. Bhardway
*C. G. S. De Silva
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D. Divine
J. C. de V. Hutchinson
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M. A. Parthasarathy
*J. R. F. Popplewell
*A. C. Price
*C. A. Rumball
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*A. C. Price
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*B. Southwell

Midwifery.

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P. T. L. Day
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M. A. Parthasarathy
*C. A. Rumball
J. B. Schofield
C. K. Simpson
C. J. C. Siggers
R. B. Sutcliffe
A. M. Weston

*Have now completed examination.

Notice

Guy's Hospital Dental Society.

THE above Society will hold its last meeting of the season on Tuesday, May 27th, at 5 p.m., in the Physiology Theatre, when Col. C. H. Howkins, C.B.E., L.D.S., M.R.C.S., L.R.C.P., Dean of Birmingham Dental Hospital, will read a paper entitled "Radium in connection with Dental Surgery."

It is hoped that all members will make a note of the date of this meeting, and that there will be an attendance commensurate with its importance.

SELWYN HOLMS,
Hon. Sec.

Papers by Guy's Men

W. H. Bowen. Severe hæmorrhage from rupture of an ovarian cyst, *Clin. Jour.*, 1930, lix, 210.

J. M. H. Campbell. Angina pectoris and coronary thrombosis; Part II. *Clin. Jour.*, 1930, lix, 205.

A. Z. C. Cressy. Treatment of tuberculous knees by cautery, *B.M.J.*, 1930, i, 857.

P. N. B. Odgers. Duodenal diverticulosis, *Brit. J. Surg.*, 1930, xvii, 592.

Change of Address

F. Holcombe Fuller, M.R.C.S., L.R.C.P., L.D.S., R.C.S., 44, Brunswick Square, Hove. *Tel.: Hove* 2631.

N. Mutch, M.D., 16, Harcourt House, Cavendish Square, W. 1. *Tel.* now changed to *Langham* 2416.

Appointments

A. T. W. Powell, M.B., B.S., D.P.H., to be Medical Officer of Health, Walthamstow.

R.A.M.C.

Major A. S. Littlejohns, D.S.O., to be Lieut.-Col.

R.A.F.

Flying Officer J. L. Groom to be Flight Lieut.

Birth

SMALLBONE—On 29th March, 1930, to Dr. and Mrs. E. G. Smallbone, 222, North Street, Romford—a son.

Marriage

RICHARDS—KEW. On April 26th, 1930, at St. Mary's Church, Northampton, by the Rev. J. F. Winter, M.A., Edward Horace Richards, F.R.C.S., Ed., son of Mr. and Mrs. E. Richards of Streatham, London, to Joan, daughter of Mr. and Mrs. F. A. Kew, of Northampton.

EDS. { J. B. B. / P. M. T. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV 31*st May* 1930 *Number* 1092

PASSIM

OUR pulse and respirations are just beginning to return to normal as we close the book on that thrilling last chapter of the romantic story of the adventures of Miss Amy Johnson, and it is with considerable annoyance that we have been deprived of the pure sensation of pride, and that a certain section of the daily press should have forced upon us a feeling of embarrassment.

No achievement of recent years has been so typical of the British character as this one, a character consisting of a sometimes lovable, but often provoking, mixture of amateurism and sportsmanship, and it would have been very comforting to reflect upon this exploit in these days of the defeat of these British attributes by, for example, that far more satisfactory but often less satisfying feature of the American character—a good healthy professionalism which leaves nothing to chance, even in sport—a defeat so well exemplified by the recent Walker Cup results. The difference between Americans and ourselves is that at the head of every sport, every profession, every industry, they can point to at least half-a-dozen men or women who have reached the stage of perfection of the Robot—men who can sink their mashie shots from a bunker over a hundred yards away, men who can remove six thyroids an hour or take nine hours over one brain operation, men who can conceive the idea of mass production as the most profitable way of making motor cars. No Briton has ever won fame by achieving perfection, but rather by displaying occasional brilliance—usually very occasional. Take, for instance, Miss Diana Fishwick, who, after playing golf seriously for only four years, defeats the American lady champion, and will quite probably develop a bad attack of slicing next week. And again, as the crowning example, take Miss Amy Johnson, a typist, who spent her pocket-money learning to fly, and after only 92 hours in the air, sets out for Australia alone in a second-hand aeroplane, and gets there! The whole story is so typically British that it would have been so easy to be whole-heartedly proud of it, had it not been told in so un-British a fashion. Esperanto was a new language designed to enable all nations to understand one another. Journalese is a new language designed to prevent one nation from understanding even itself, a language born of bustle, cheap sensationalism, immodesty and uneducated priggishness, and this is the language in which the story of Amy Johnson's adventure has been set before the public by a certain section of the daily press—"Joystick Johnnie," "the Queen of the Air," the "22-year-old girl Lindberg," "the whole-time air-girl," are the phrases used to describe a girl who is "on top of the world down under." And now that Amy Johnson's flight is over, her exploits are being employed by the Press as a means of vulgar self-advertisement. Surely, such an attitude, unlike the adventure itself, is not typical of the British character.

ON Tuesday, 13th May, Professor G. Elliot-Smith gave the Fifth Fison Memorial Lecture, Sir E. Farquhar Buzzard being in the chair. He took as the title "The Distinctive Attributes of the Human Brain." In the course of an hour he traced the anatomical development of the brain in the higher apes and early man, and reviewed our present slight knowledge of the physiology of the cerebrum. He stressed the enormous part that the evolution of the macula fovea has played in the perfection of vision—over half the fibres of the optic nerve take their origins from this minute arm of the retina, so we learnt—and consequently in the evolution of the cerebrum, for in the higher apes the fibres of the optic nerve terminate in the brain stem, and all reflexes are unconscious, whereas, in man the vast majority end in the cerebral cortex about the calcarine fissure and reflexes are sub-conscious, while all sensory stimuli of vision can be brought into consciousness itself. The result has been an immense widening of the field of physical activity, and the development of new, as well as finer and more controlled movement. In this connection the sub-

temporal lobe has been evolved, and is the site of latent increase in grey matter. Again and again Professor Elliot-Smith stressed the most important part played by all physical activities requiring exact co-operation of muscle and eye, in the farthest advancements made by the human brain.

The lecture was at all points illustrated by numerous diagrams for the elucidation of the subject matter, which was of utmost interest and within the comprehension of all present. It had been our intention to publish a detailed résumé, but to date we have not been in a position to do so; we understand, however, that the complete lecture will shortly be available in monograph form.

THE post-prandial slumbers of the medical ward clerk awaiting in the Park his physician's arrival, were disturbed on Monday last by more than a thunder-shower, for a Treasure Hunt had been organised in aid of the College of Nursing Endowment Fund, and excited young men and women rushed, regardless of their less fortunate working friends, hither and thither in search of clues.

On Tuesday and Wednesday evenings a Musical Entertainment was given in the Physiological Theatre, in aid of the same cause, and it is rumoured that a considerable sum of money has been collected by these means.

On Some Common Disorders not Commonly Diagnosed*

A Clinical Lecture by Arthur F. Hurst, Esq., M.D.

GENTLEMEN,—Looking back at the history of medicine one is often astonished to find how often a disease with very striking clinical features has escaped recognition until quite recent times. As soon as attention is drawn to such a newly described disease, cases are diagnosed with such frequency that one wonders how one could have missed such an obvious clinical entity in the past. I remember when myotonia atrophica was first described recognising a typical case the following Wednesday at my neurological out-patients; he had attended for years and had frequently been an in-patient, but had always passed muster as an ordinary case of primary muscular dystrophy and nobody had observed his remarkable myotonia. More recently, after reading a paper by Vinson on dysphagia associated with anæmia and splenomegaly, I found that the condition, which we subsequently found was always associated with glossitis, was comparatively common, and I have seen quite a dozen cases in the last five years. I cannot imagine what diagnosis I must have made in the cases I had seen in the previous twenty years.

Some of the disorders I shall describe to-day are quite common; not one is rare. But as they are either not mentioned at all in most modern text-books or are described inaccurately or with insufficient emphasis and detail, the average man cannot be expected to recognise them when cases come before him. Directly he realises that these conditions exist, he will be surprised how frequently they occur. This will, I hope, more than compensate for the loss of the "mythical maladies" I described in my last lecture.

*Staphylococcal septicæmia and perinephric abscess were described in the lecture, but are omitted here, as a very full discussion on the subject by Dr. Ryle and other authors appears in the April number of the "Guy's Hospital Reports."

INTERMITTENT HYDRONEPHROSIS DUE TO ABERRANT RENAL VESSELS: DIETL'S CRISES.

Kinking of the ureter by an aberrant renal vessel is a common disorder not commonly diagnosed; it is almost the sole cause of Dietl's crises, which are still often ascribed to movable kidney—one of the "mythical maladies."

Visceral pain is caused by stretching of the muscle and fibrous tissue of the walls of hollow viscera. Thus the kidney itself is insensitive, but sudden distension of the pelvis gives rise to severe pain. Apart from renal calculus the commonest cause of this is kinking of the upper extremity of the ureter by an aberrant renal artery. Sudden attacks of violent pain in the renal region, generally of short duration, are produced. Vomiting often occurs and in rare cases it is the most prominent symptom, so that the attacks are regarded as of gastric origin. Apart from the attacks, the patient is generally perfectly well. The urine is normal in the intervals, and it generally remains normal during the attacks. If the patient is examined during a crisis, an enlarged and tender kidney can generally be felt; the tumour subsides when the attack is over, but its collapse does not often give rise to an excessive flow of urine, though this has sometimes been described as an essential symptom of the condition.

Before the discovery that an aberrant renal vessel was the most common cause of intermittent hydronephrosis, Dietl's crises were supposed to be due to simple kinking of a very movable kidney. But in the large majority of cases the kidney is not unusually mobile and it is generally not palpable in the intervals between attacks. Whereas a very movable kidney is very rare in men, seven out of my last sixteen cases of hydronephrosis due to an aberrant renal vessel occurred in men, and although

the right kidney is always more movable than the left, in eight of these sixteen cases the left kidney was involved. I have seen only a single case in which the kidney was really very movable.

Owing to inaccurate teaching on the subject the condition is recognised much less frequently than it should be. Many of my patients had had one or more abdominal operations performed for the pain before its true nature was recognised. One woman of 55 came to us in order to have the diagnosis settled between the following alternatives which had already been made: "colitis, appendicitis, gall-stones, floating kidney, enteroptosis, atony of the bowels, amyotrophic lateral sclerosis." She was found to have a right hydronephrosis secondary to an aberrant renal vessel.

As in so many abdominal conditions, if great care is taken in obtaining an accurate history and description of the symptoms, the diagnosis can be made with a considerable degree of confidence. In the intervals between attacks, abdominal examination reveals no abnormality, and the ordinary laboratory and radiological methods of investigation give no help. The diagnosis can, however, be settled by pyelography, when the dilated calyces and the dilated pelvis of the kidney can be readily recognised (Figs. 1 and 2). The intermittent distension always leads to some permanent dilatation, although the pelvis is collapsed in the intervals between attacks, so that the kidney is only enlarged when actual obstruction is present. If the ureteral catheter is passed without difficulty, the X-rays show no stone and the urine is normal, the diagnosis is clear.

Fig. 1.—Pyelogram of a Normal Kidney (Dr. P. J. Briggs).

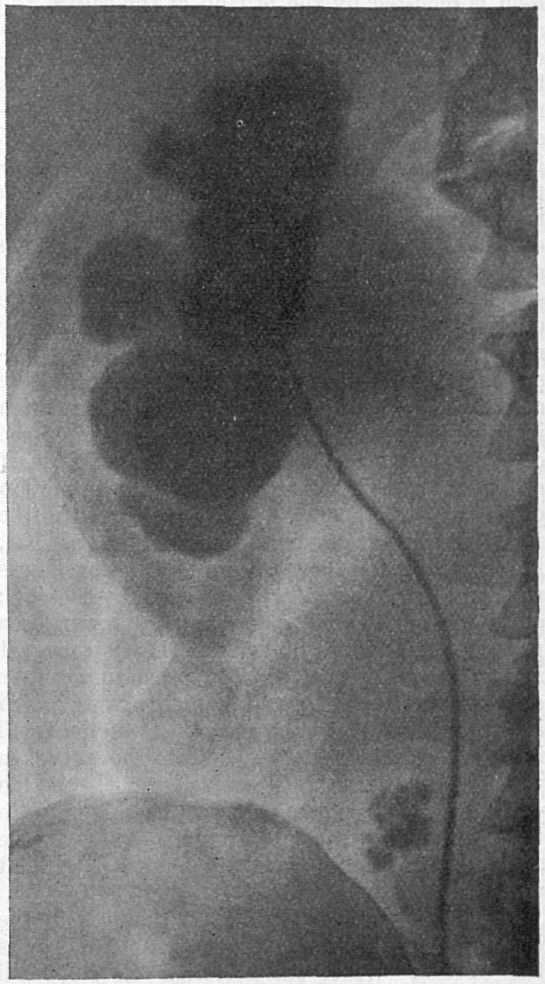


Fig. 2.—Pyelogram of a case of Intermittent Hydronephrosis with Dietl's Crises caused by kinking of the ureter over an aberrant renal artery in a man of 30. Nephrectomy by Mr. Gaymer Jones. Recovery. (Dr. P. J. Briggs).

In the majority of cases division of the aberrant renal vessel cures the patient. Only when the condition is of such long standing that most of the kidney tissue has atrophied or when secondary infection has taken place is it necessary to perform nephrectomy.

INTESTINAL CARBOHYDRATE DYSPEPSIA.

Intestinal carbohydrate dyspepsia is one of the commonest abdominal disorders, although in the majority of English books on medicine it is not even mentioned.

Under normal conditions the starch taken in food is digested by the ptyalin of the saliva, the amylopsin of the pancreatic juice and the diastase of the juice secreted by the small and large intestines. The ptyalin is least important, as it is rapidly destroyed by the first trace of free hydrochloric acid which appears in the stomach, before it has had time to act. The amylopsin is also comparatively unimportant, as the digestion of starch is generally unimpaired in advanced pancreatic disease, though much undigested fat and protein appear in the stools. The diastase secreted by the small intestine is, however, essential for the efficient digestion of starch, and when for any reason its secretion is deficient, a more or less considerable quantity of unaltered starch reaches the colon. It was formerly believed that the starch in vegetable food could only be digested when the cellulose had been broken up by cooking, or, if eaten raw, after it has been dissolved by the action of a hypothetical cellulose-splitting ferment in the small intestine or of bacteria in the colon. It has, however, recently been shown that the cellulose walls of vegetable cells are not broken by cooking; and a cellulose-splitting ferment has never been proved to exist in the human alimentary tract. It is now known that bacteria do not normally take any part in the digestion of carbohydrates, which is almost confined to the upper part of the small intestine. Ferments can penetrate the unbroken walls of vegetable cells and digest the starch within them, the sugars produced passing out into the surrounding media from which, owing to the absence of bacteria, they are absorbed without undergoing fermentation.

Normally starch is completely digested in the upper part of the small intestine and none reaches the cæcum. When the secretion of the small intestine is deficient, ptyalin and especially amylopsin can completely digest free starch or starch in cells with broken walls, but the starch in intact cells reaches the cæcum. Here the diastase of the cæcal secretion penetrates the cells, but the sugars which pass into the surrounding media are attacked by bacteria which are present in very large numbers, and they undergo fermentation before there is time for much absorption to take place. The symptoms of carbohydrate intestinal dyspepsia are caused by the carbon dioxide and acetic and butyric acids produced by this fermentation.

In most cases of carbohydrate intestinal dyspepsia there is a history of food poisoning or of some intestinal infection. The condition, however, can only develop if the damage is confined to the small intestine and the stomach and colon are spared. Thus it is never associated with achlorhydria, as the ptyalin of the saliva can compensate for the absence of the small intestine diastase when there is no free hydrochloric acid in the stomach to destroy it. When colitis is present as well as enteritis, the undigested starch which reaches the cæcum passes through the whole colon without undergoing digestion, as the digestive secretion of the colon is as deficient as that of the small intestine and little or no diastase is present in the fæces. Consequently no sugar is set free and no fermentation occurs either in the colon or on incubation of the stools, in spite of the fact that they may contain a considerable quantity of starch.

The chief symptom of intestinal carbohydrate dyspepsia is a widespread feeling of discomfort and fulness in the lower part of the abdomen caused by distension of the colon with carbon dioxide. It is often most marked just after meals as a result of exaggeration of the gastro-colic reflex, and before defæcation. The discomfort is often greatest during the night and is a very common cause of insomnia. A patient of mine woke regularly at 4 a.m. owing to the noises in his intestines; he had no discomfort, but the noise kept him awake for an hour or more. His nights ceased to be disturbed as soon as the excessive fermentation was prevented. The irritation caused by the gas and organic acids may cause spasm; the patient then complains of actual pain, this condition being, I believe, the commonest cause of colon spasm. Excessive quantities of odourless flatus are passed, and some relief is always felt after its escape. Constipation only occurs if the condition is associated with spasm, and it may then alternate with diarrhœa caused by the stimulating action of the carbon dioxide and organic acids. More frequently the stools are formed, but in severe cases attacks of mild diarrhœa are common, much gas being always passed with the stools, which are acid and have an unpleasant sour, but not putrefactive, odour when they are liquid. The diarrhœic stools always contain an obvious excess of undigested vegetable matter, and if kept for some hours bubbles appear as a result of fermentation of the undigested carbohydrates they contain.

The stools should be examined whilst the patient is on his usual diet. Microscopical examination reveals the presence of large numbers of starch granules, some free and some in their cellulose envelopes ; they are stained blue with iodine. Few or none are present in normal fæces. In contrast with the stools in pancreatic achylia there is no excess of fat or of striated muscle fibres. Knott has shown that the normal enterococci of the colon are present in considerable excess, but that the number of B.*coli* is not increased and no pathogenic organisms are found. On giving a starch-free diet the excess of enterococci rapidly disappears : it is clear, therefore, that they are not the cause of the condition, as has generally been supposed, but the result of the excess of starch and sugar which is present in the colon and forms an excellent culture medium for the multiplication of these bacteria.

The fermentation test devised by Adolf Schmidt, who was the first to recognise this condition, gives a striking demonstration of its nature, though the microscopical examination of the stools is sufficient to make the diagnosis certain. A small quantity of fæces is mixed with water and incubated for twenty-four hours, any gas given off being collected. No gas is evolved from normal stools. In intestinal fermentative dyspepsia the fermentation which has been taking place in the colon continues *in vitro*, and a considerable quantity of odourless gas is evolved, the fæces at the same time becoming very acid. Knott has found that if a stool is kept too long before examination, it becomes sterile owing to the antiseptic action of the organic acids which develop. In putrefactive diarrhœa, which is due to insufficient digestion of meat, a smaller quantity of foul gas is evolved, and the fæces become strongly alkaline.

The treatment of carbohydrate intestinal dyspepsia is very simple. Sugars are perfectly digested, and in all but the most severe cases in which chronic diarrhœa is present free starch, as in flour and bread, is well digested, as the pancreatic amylopsin can deal with this. It is only necessary to cut off all starch in closed cells from the diet. In mild cases it may be enough to prohibit potatoes. In severe cases, especially when diarrhœa is present, it is necessary to exclude all vegetables and fruit, whether cooked or raw. Within a week the excess of enterococci disappear from the stools, which no longer ferment on incubation. It may be necessary to avoid potatoes and other root vegetables for a considerable period and sometimes permanently.

I have generally given an active preparation of an amylolytic ferment with each meal, which Knott has shown is not destroyed by the acid of the gastric juice, as when this is done it appears that less restriction in diet is necessary. This should be continued for a considerable period, especially if an attempt is made to give potatoes again.

Formerly I also gave a tablespoonful of powdered charcoal in a small quantity of water morning and evening to absorb any gas which is still produced. This is, however, quite unnecessary if a sufficiently strict diet is ordered. It is much better to prevent the production of gas than to provide for its absorption, as the condition can only be permanently cured by curing the enteritis, which is kept active by the mechanical irritation of undigested vegetable matter and the chemical irritation of the production of bacterial activity on starch.

In severe cases with much diarrhœa a teaspoonful of chalk given three times a day hastens recovery, as the irritating organic acids are then neutralised as soon as they develop.

As the excess of enterococci present is a result and not the cause of the condition, which is due to deficiency of succus entericus and not an infection with streptococci or other organisms, treatment by vaccine is quite useless. I have seen many patients rapidly cured by diet alone after having undergone many months of treatment by inoculation without the slightest benefit. Colonic lavage, which is almost as popular a treatment, is of course equally futile.

The recognition of the true nature of the condition and its rational treatment is of the greatest importance in many neurasthenic and psychasthenic individuals, whose condition is greatly aggravated by the insomnia caused by carbohydrate intestinal dyspepsia, with which they are often associated. I have often found in such cases that a suitable diet with no drugs rapidly cures long-standing insomnia, which has failed to respond to treatment by drugs such as medinal and luminal.

HERNIA OF THE LINEA ALBA AND LINEA SEMILUNARIS.

As long ago as 1743 Garengest spoke before the Académie regale de Chirurgie on the digestive symptoms resulting from epigastric hernia. Very little attention, however, has been paid to the condition, especially in England, where it appears to have been described for the first time in a paper Dr. Ryle and I published in the *Guy's Hospital Reports* as recently as 1922. It is very important to realise that such hernias occur, as they are then easily recognised, but if not specially looked for a diagnosis of appendicitis, gallstones, gastric or duodenal ulcer or some other intra-abdominal disorder is almost certain to be made.

Hernia of the linea alba is not uncommon, especially above the umbilicus, when it is called an epigastric hernia. I have seen one case of

hernia of the linea semilunaris, but so far as I know it is unique. These hernias generally occur in men, but I have seen two cases in women. The linea alba above the umbilicus is perforated by numerous vessels, which carry a prolongation of the transversalis fascia with them. The points of perforation form minute weak spots and any increase in intra-abdominal pressure may force some of the subperitoneal fat through them. As the filiform ligament of the liver is attached just to the right of the middle line, the fat of the hernia is continuous with that which exists between its two peritoneal layers. It is really a fat prolapse and not a true hernia, as it never contains a hernial sac and the fat is never derived from the omentum. Owing to the inelastic nature of the linea alba the hernias are generally very small, the majority being no larger than a pea.

The most characteristic symptom is severe pain of sudden onset and short duration, which the patient localises to a single point in the middle line, generally nearer the umbilicus than the ensiform cartilage. It is frequently sufficiently severe to call for the injection of morphia. It is often brought on by vigorous exercise, sometimes only of a special character, such as gardening or golfing. In my case of hernia of the linea semilunaris the first attack occurred whilst the patient was standing upside down on his hands with his body and legs inclined backwards. Subsequent attacks only occurred when he was playing polo and leaning to the side opposite to that of the hernia. It generally disappears on lying down, but attacks may develop in the night.

A doctor sent me the following note on the pain in the case of a woman of 65, who was suffering from agonising attacks lasting from five to ten minutes: "They are not typical of anything. I thought of abdominal angina—but unrelieved by amyl nitrite or nitroglycerine; gastric ulcer—but never saw pain so acute and short lived in this; gallstones—but so many attacks and all so short." Her appendix had been removed many years before, but in most of my cases the appendix had been removed on account of the pain and in one case the gall-bladder also. In several cases the patient had had a long course of treatment for a supposed ulcer.

The pain is generally unrelated to meals, though occasionally food aggravates or relieves it. One patient, a jockey, said that he had fewer attacks when eating lobster and pickled pork than when he was on a milk diet. On the other hand, in a case of Dr. Ryle's pain came on two or three hours after food and also almost every night, but some attacks had also followed the action of stooping to lace his boots. Dr. Ryle suggested that in this case the symptoms were probably dependent on reflex disturbance in pyloric activity due to irritation of the abdominal wall, akin to that which occurs in appendix and gall-bladder dyspepsia, and that the case exemplified the existence of reversible reflexes between hollow viscera and the parietes.

The severe pain may be followed by a feeling of distension, which is often associated with aerophagy. Nausea and less frequently vomiting may occur.

On examination a very small and exceedingly tender tumour is felt in the course of the linea alba or semilunaris. Occasionally no tumour is felt, but only a very tender point, corresponding with the exit of a blood vessel, or an equally tender minute gap through which the hernia presumably protrudes during an attack.

The only treatment is to excise the fatty tumour, ligature the accompanying vessel, and put the stump back through the hole in the linea alba, which is then closed without opening the peritoneal cavity. When no actual hernia is present, a vessel may be found at the tender point; this should be ligatured. In one case only a weak area, corresponding with the gap felt before the operation, was found; this was excised and the edges brought together.

It is, of course, possible for an epigastric hernia to coexist with an independent organic intra-abdominal disease. I have recently seen a man with typical symptoms of duodenal ulcer and an unusually large and somewhat tender epigastric hernia. But the X-rays showed a characteristic deformity of the duodenal bulb and the stools contained occult blood, so that there can be no doubt that the symptoms were caused by an ulcer and not by the hernia.

BILIARY COLIC WITHOUT GALLSTONES.

I have seen several patients with typical attacks of biliary colic associated with extreme tenderness over the gall-bladder, but without jaundice, in whom no stone was found at operation. In recent years the diagnosis has often been made before operation, when a perfectly normal gall-bladder has been demonstrated with the X-rays, and its contents obtained through a duodenal tube after injection of magnesium sulphate have been free from crystals, epithelial cells, leucocytes and bacteria. When in such cases the healthy looking gall-bladder found at operation has not been removed, the attacks have continued with undiminished frequency, but have ceased when cholecystectomy has been subsequently performed. I have now had several cases, in which the operation has been performed at the first laparotomy in spite of the normal appearance of the gall-bladder, and, although microscopical and bacteriological examination have revealed no abnormality, the patient has

been cured. In several instances Mr. Rowlands has demonstrated definite anatomical abnormalities of the biliary ducts, which must have led to recurrent obstruction of the cystic duct and dilatation of the gall-bladder, very much in the same way as an aberrant renal vessel leads to recurrent obstruction of the ureter and hydronephrosis.

BILIARY COLIC AFTER CHOLECYSTECTOMY: ACHALASIA OF ODDI'S SPHINCTER.

Most surgeons have experienced the disappointment of finding that a patient continues to have attacks of typical biliary colic after the gall-bladder has been removed, together with any stones which were found in the ducts. It is often assumed that a small stone must have been left in the hepatic or common bile duct in spite of careful exploration at the time of the operation, but in the majority of cases a second operation reveals no abnormality, and the surgeon is forced to the unsatisfactory conclusion that the symptoms are caused by adhesions. The attacks, however, recur in spite of their division, and must therefore be due to some other cause. I believe that the explanation is the profound disturbance which occurs in the neuromuscular activity of the bile passages after cholecystectomy. The common bile duct is frequently greatly dilated after the operation. This must be due to some functional obstruction at its mouth. Normally it is kept closed by the tonic action of Oddi's sphincter, which relaxes when the duodenum is stimulated by the presence of fat, the products of protein digestion in the stomach, especially peptone, and by various salts, especially magnesium sulphate. The gall-bladder and bile ducts contract at the same time and evacuate their contents into the duodenum. After cholecystectomy this mechanism is temporarily inhibited and achalasia (absence of relaxation) of Oddi's sphincter results. The closed sphincter offers sufficient resistance to cause damming of the bile in the common bile duct, which consequently dilates. The muscle of the common duct may make such vigorous efforts to overcome the resistance that attacks of colic occur.

The condition can almost invariably be cured at once by increasing the frequency and strength of the stimuli to the duodenum which lead to reflex relaxation of the sphincter. Venables has proved that magnesium sulphate is just as effective in promoting biliary drainage when given by mouth as when introduced through a duodenal tube, as recommended by Lyon. The maximum dose which does not cause looseness of the bowels should be given in concentrated solution on waking in the morning. If there is already a tendency to diarrhœa, sodium citrate may be used instead, though it is less effective. A tablespoonful of olive oil taken half-an-hour before each meal has the same effect. I always advise patients to take Epsom salts and olive oil in this way as a prophylactic after operations on the gall-bladder. If magnesium sulphate is used to promote biliary drainage instead of any other aperient, and large doses of hexamine (100 grains three times a day) with sufficient alkali to keep the urine alkaline and free, as a biliary antiseptic both in the days immediately preceding and immediately following the operation, the risk of unpleasant complications is greatly reduced.

ALCOHOLIC HEPATITIS.

Cirrhosis of the liver, which was a common disease at Guy's before the war, is now rare. On the other hand, a pre-cirrhotic condition of the liver caused by alcoholic excess is more common than ever, particularly among the well-to-do. Whilst the poor man's beer is cheaper and weaker than it was before 1914, many people celebrate their newly-acquired wealth by excessive indulgence in cocktails, champagne and whisky. They may complain of general unfitness, anorexia and nausea, or their chief symptoms may be due to the effect of alcohol on their heart, central nervous system or peripheral nerves, but they rarely have symptoms directly referable to the liver. There is no jaundice, ascites or hæmatemesis. The liver is hard, moderately enlarged, and tender.

The lævulose test invariably shows more or less well-marked hepatic insufficiency. If 50 grms. of lævulose are taken when fasting, the blood sugar should not rise more than 15 or 20 mgrs. per 100 c.c. in an hour, and in two hours it should fall to the fasting level. In alcoholic hepatitis it rises between 25 and 75 mgrs. in one hour, and there is either no fall at all at the second hour or the fall is complete.

There is no anatomical evidence as to the exact nature of this condition, as it is not in itself fatal. Presumably it is a toxic hepatitis, which is the first stage in the development of cirrhosis of the liver. The majority of the hepatic cells are still capable of recovery, and if no further poisoning takes place the clinical and biochemical signs of a disordered liver disappear.

Excess of mucus, indicating the presence of chronic gastritis, is generally found in every fraction of a test-meal, and this often gives rise to secondary achlorhydria.

Some of the patients have been drinking obviously excessive quantities of alcohol, though they may never get drunk, but in other cases, especially among the " bright young people " who frequent cocktail parties, it is the kind of alcohol

and the time it is consumed rather than the total quantity which is responsible for the damage.

The treatment is simple. Complete abstinence from alcohol and a light diet with rest in bed lead to rapid recovery. If severe gastritis is present, lavage every morning with dilute hydrogen peroxide (1 drachm to half-a-pint) hastens the recovery. In mild cases a fortnight, in severe cases a month or six weeks is generally sufficient to restore the patient to good health. He feels well, his appetite returns, and corresponding with this his liver is no longer tender, enlarged or hard. The lævulose test shows that there is little or no hepatic insufficiency. A fractional test-meal gives a normal curve of acidity, even if achlorhydria had been present, and all signs of gastritis disappear. A man of 50, who had been drinking champagne in excess for 20 years, came to us in a condition of stupor. He recovered completely in a month, and now five months later he is playing tennis with his children for the first time for seven years (*Vide* Case 1, Table 1).

	I	II	III
Case 1—M.50. 18/10/29	118	153	142
7/12/29, after 6 weeks' abstension	103	120	104
Case 2—M.52. 14/8/26.....	119	192	190
25/11/26, after 3 mths' abstension	111	111	98

TABLE 1.—Column I is fasting blood-sugar in mgr. per 100 c.c.; column II, blood-sugar 1 hour after taking 50 gm. lævulose; column III, 2 hours after.

When the condition of affairs is explained to an intelligent patient and he realises the serious outlook if he continues with his old habits, it is almost always possible to persuade him to become a complete teetotaler. Drinking in such cases is simply a habit, the pleasure of which he realises did not compensate for the unfitness it caused. The prognosis is of course entirely different in dipsomania, which is an almost incurable psychoneurosis.

AMŒBIC HEPATITIS.

Major Covell, I.M.S., in a paper published in the *Guy's Hospital Reports* for 1923, showed that amœbic dysentery is always associated with hepatic insufficiency as demonstrated by the lævulose test, although in a large majority of cases there is no sign of hepatic disorder. Acute and subacute hepatitis and hepatic abscess are common complications of amœbic dysentery; it therefore seems reasonable to assume that the functional deficiency of the liver in these cases was caused by a latent mild form of amœbic hepatitis.

Since that time we always test the lævulose reaction in patients complaining of unfitness since returning from a country in which amœbic dysentery is endemic. In sixteen cases hepatic insufficiency has been discovered; sometimes the patient has had definite dysentery, but in others he has had nothing more than a few attacks of diarrhœa, and occasionally he has never had intestinal symptoms of any kind. He complains of general unfitness, and very often rightly describes himself as liverish. He is easily fatigued and generally suffers from a constant ache over the whole of the liver area. His appetite is poor and he is pale and sallow, though generally not anæmic, and true jaundice is never present. The whole of the exposed surface of the liver is tender, but it is often neither enlarged nor abnormally hard. We have very rarely found amœbic cysts in the stools, but in a small proportion of cases, in spite of the absence of intestinal symptoms, the sigmoidoscope has revealed the presence of small but typical amœbic ulcers—raised red spots with a necrotic centre on a normal pink mucous membrane, very closely resembling boils on the skin. Not infrequently the cæcum and ascending colon are tender, and the stools may contain traces of occult blood, presumably the result of chronic amœbic typhlitis.

The diagnosis is quickly confirmed by the result of treatment. The injection of 1 grain of emetine hydrochloride every night for twelve nights results in the disappearance of all symptoms and the lævulose test shows that there is no longer any hepatic insufficiency (Table 2).

	I	II	III
F.53: before treatment.....	89	160	120
after treatment	108	124	126
F. : before treatment.....	75	130	105
after treatment	105	111	105
F.33: before treatment.....	86	120	100
after treatment	84	102	82

TABLE 2—Column I gives the fasting blood-sugar in mgs. per 100 c.c.; column II, the blood-sugar one hour after taking 50 gms. lævulose; column III, two hours after.

It is necessary, however, to give further courses of six or more injections three, six and twelve months later in order to prevent recurrence. We have found this treatment far more efficacious and far less upsetting to the patient than the administration of the various other drugs which have been recommended for the treatment of amœbiasis.

Chronic amœbiasis of this kind is very common among people who have retired from the Services or business in the East and live in all parts of England, although it has not hitherto been described either in works on tropical medicine or in monographs on disorders of the liver. It is very important that it should be recognised, as much chronic ill-health can be prevented by suitable treatment.

Guy's Hospital Nurses' League

THE 30th Annual Meeting was held in the Massage Department, on Friday, May 9th, at 8 p.m. After an excellent dinner in the Nurse's Home, over 200 past members and many present members attended, and the business was disposed of in the usual lively manner to the enjoyment of all present.

Miss E. M. S. Johnston, the Matron of the Bristol Royal Infirmary was in the Chair, and the following past Guy's Matrons were present: Dame Sarah Swift, Miss Haughton and Miss Hogg.

The Honorary Secretary, Miss MacManus, read the Yearly Report and the Financial Statement which showed an excess of income over expenditure of £200 16*s.* 7*d.*

Mrs. Davies-Colley gave an inspiring speech on behalf of the Ladies' Association, appealing for new members from amongst past Guy's Nurses, to join the Association and contribute 2*s.* 6*d.* and garments yearly to "clothe the Hospital."

Prizes and Medals for the year were then presented by Miss Johnston, and also prizes for the Exhibits of needlework and photography from present and past nurses. These were on view in the Nurses' Home and showed some excellent work in all sections.

In the report, Miss MacManus referred with regret to the deaths of one of the Vice-Presidents of the League, Sir Cosmo Bonsor—and one of its Patrons, Sir Alfred Fripp. Both of them will be missed tremendously for their interest, encouragement and generosity in all nursing activities in the Hospital.

The deaths of the following members of the League were also reported:—

Miss Alice M. Anson, who died at Abingdon-on-Thames on December 10th, 1928, after a very short illness. Miss Anson entered Guy's as a Lady Pupil in October, 1888, and held the appointment of Sister-in-Charge and Lady Superintendent of the Royal Alexandra Hospital, Rhyl, for 25 years.

Miss Louisa Emma Danchet, who died at Edgware on May 28th, 1929, at the age of 78. Miss Danchet entered Guy's in 1882, and for 31 years was Superintendent Nurse of the Hendon Infirmary, retiring in 1920, much to the regret of all with whom she worked.

Miss Minnie H. Leng, who died at Sidmouth on May 30th, 1929. Miss Leng entered Guy's as a Lady Pupil in 1894, and held the posts of Assistant Matron and Sister of Mary Ward, Matron of Wolverhampton Hospital, and she did a great deal of nursing in the Boer and European Wars.

Miss Henrietta Delgado, who died in Dorcas Ward on June 17th, 1929, from septicæmia. Miss Delgado entered Guy's in August, 1920, and afterwards joined the Ranyard Nurses' Mission.

Miss Aline Fanconi, who died at Poschoavo, Switzerland, on September 19th, 1929. Miss Fanconi entered Guy's in February, 1918, and on completion of her training joined the Guy's Trained Nurses' Institution for one year, and afterwards did nursing work in Italy.

Miss E. E. Ford, who died in a Nursing Home in Dublin on September 30th, 1929. Miss Ford entered Guy's as a probationer in August, 1908, and on completion of her training joined the Guy's Hospital Private Nursing Staff. She also held the post of Assistant District Midwife and District Coach for nearly three years. She was appointed Sister-in-Charge of the King Edward VII Maternity Hospital, Cardiff, in 1918, and in 1922 was appointed Lady Superintendent of the Rotunda Hospital, Dublin.

Miss Hilary Kershaw, who died in St. George's Hospital on 22nd February, 1930. Miss Kershaw entered Guy's as a probationer in 1919, and since completing her training has held Sister's appointments in various Hospitals.

Miss Jane Hills, who died suddenly at Bedford, on February 3rd, 1930. Miss Hills entered Guy's in 1891, and on completing her training joined the Guy's Private Nursing Staff, remaining there until she retired in December, 1919.

Miss Clara E. Moore, who died on March 20th, 1930, at a Nursing Home in Streatham. Miss Moore entered Guy's as a paying probationer in January, 1904, and on completion of her training took up private nursing.

The Financial Statement was next read by the Honorary Secretary as follows:—

The Hon. Members' subscriptions amount to £40 1*s.* 6*d.*, the Past Members' subscriptions and Composition Fees to £178 2*s.* 6*d.*, and the Present Members' subscriptions to £143 13*s.* 9*d.* The Subscriptions and Grants have again covered the working expenses at the Cottage, and of the different Clubs, and we have also paid a sum of £33 6*s.* 8*d.*, part cost of Railway Tickets to Honor Oak Park. Our income for the year, which includes a generous donation of £50 from the late Sir Cosmo Bonsor, of £20 from Mr. A. C. Gladstone, one of the Governors, and £5 from Mrs. Barnicot, amounts to £754 3*s.* 3*d.*, and our expenditure for the year to £533 6*s.* 8*d.*, leaving an excess of income over expenditure for the year of £200 16*s.* 7*d.* We have also purchased 5 per cent. War Loan Bonds to the value of £300, which brings the amount of Capital invested in this Stock to £1,100. The dividends from these investments will nearly

cover three-quarters of the cost of the Nurses' League Register, if published every three or four years, and we are hoping to make preparations for a new issue during the course of the next few months.

The balance carried forward amounts to £167 6*s.* 7*d.*, but a great deal of this sum will be required to meet some heavy expenditure which we shall incur in making up the Hard Tennis Courts at the Cottage this year.

The retirement of Mrs. Hughes, after serving as Hon. Treasurer for the past ten years, during which time Mrs. Hughes has taken a wonderful interest in the finances of the League. Collecting subscriptions is no easy task, but our Treasurer has put her whole heart into it, and must be happy to know that she leaves the financial position in a much more satisfactory state than ten years ago. For example, I would remind you that during Mrs. Hughes' tenure of office, the Cottage has been enlarged, extra accommodation being provided for the Sisters. A second hard tennis court has been laid down. An extra piece of land has been taken in for the extension of the garden. The debt on the Cottage has been cleared off, and a lease of 999 years granted, leaving a small nominal ground rent of £30 to be paid each year. Two beds in the Hospital have been endowed for the use of League Members, a sum of over £2,400 having been collected as the Nurses' League Bicentenary Fund.

An announcement was then made that The League Garden Party will be held at the Cottage on June 18th. It will be advertised in the Nursing Press, in order to get into touch with as many Members as possible who may be home on leave from foreign parts. Arrangements may have to be on a simpler scale this year, as Sir Cosmo's help will be lacking, but it is hoped that it may be a fine day and a happy gathering.

MEDALS AND PRIZES FOR THE YEAR 1929.

The Butterworth Medal.

The Butterworth Medal, instituted by Joshua W. Butterworth in 1889, is awarded to all Nurses of Guy's Hospital who shall have completed five years' continuous satisfactory service at the said Hospital:—

Sister Gwendoline A. Birdseye.
Sister Margaret L. Carey.
Sister Constance M. W. Court.
Sister Annie M. Fraser.
Sister Phyllis Samuels.
Sister Florence Taylor.
Staff Nurse Nelly A. Grimes.

The Cazenove Medal.

The Cazenove Gold Medal is awarded to the Nurse who shall have obtained the highest aggregate percentage of marks in all the Examinations held during 1928 and 1929.

Nurse Juanita D. Litten.

The Keogh Prize.

The Keogh Prize, consisting of Surgical Instruments, is awarded to the Nurse obtaining the highest number of marks in the Surgical Examination.

Nurse Gladys B. Smith.

The Morrison Prizes.

The Morrison Prizes, Medical Books, are awarded to the Nurses obtaining the highest number of marks in the Examinations in Nursing Subjects.

June, 1929—Nurse Lucy C. de la Court.
Dec., 1929—Nurse Rosalind Rose-Price.

Bernard Loftus Brown Prizes.

The Bernard Loftus Brown Prizes, presented by Mr. and Mrs. A. Loftus Brown, in memory of their son, are awarded to the Nurses gaining the highest number of marks in each of the Final Practical Nursing Examinations held during the year.

March—Nurse Ruth C. Shackles.
July—Nurse Juanita D. Litten.
October.—Nurse Phyllis M. Watson.

The Governors' Prizes.

The Governors' Prizes, Medical Books, are awarded to probationers obtaining the highest number of marks in the two Junior Examinations held during the year.

August, 1929—Nurse Rubie E. Jenner.
February, 1930—Nurse Kathleen J. Parker.

PHOTOGRAPHIC AND ART EXHIBITION.

CLASS A.

Prize—Miss K. Looker (No. 2) At Thorpe Green.

CLASS B.

1st Prize—Miss G. H. Fletcher (No. 49) Sunset.
2nd Prize—Miss G. E. Bristow (No. 11) The Lagoon, Venice.
3rd Prize—Miss D. Bricknell (No. 18) Brothers Water from Kirkstone Pass.
4th Prize—Miss M. W. Sparks (No. 16) By the River Bank.
Highly Commended—
Miss L. Oldendorff (No. 9) Lacock Village, Wilts.
Miss M. W. Sparks (No. 17) Unloading the Fishing Boat.
Miss C. Court (No. 22) Lazarus Ward, 1926.
Miss B. M. Davis (No. 37) R. 101.
Miss E. E. P. MacManus (No. 45) Niagara.
Miss K. Looker (No. 48) Saas Fee.

CLASS C.

1st Prize—Miss M. Livingstone (No. 14) Good.
2nd Prize—Miss M. Barford (No. 4) Child Study.

Highly Commended—
Miss J. D. Litten (No. 1) Ben Hiant from Mish Nish.
Miss M. Gracey (No. 7) Here and There (*c*).

NEEDLEWORK EXHIBITION.

List of Awards.

Section 1.

Class A—*Plain Needlework.*

1. *Underclothing—*
Prize—Miss M. R. Ferguson..... Nightdress.
Highly Commended—Miss A. West Nightdress.
2. *Children's Clothes—*
Highly Commended—Miss Dixon Child's Frock.

Class B. *Fancy Work.*

Embroidery—
Prize—Miss E. Bullock ..... Petticoat.

Class C.

2. *Crochet—*
1st Prize—Miss G. M. Reed ..... Tablecloth.
2nd Prize—Mrs. Staines..... ..... Tablecloth.
3rd Prize—Miss B. Weller ..... Tablecloth.
3. *Knitting—*
Prize—Mrs. Hawes, Child's coat, frock and bonnet.

Class D. *Dressmaking—*

1st Prize—Miss E. Elliott ..... Frock.
2nd Prize—Miss L. Cripps ..... Frock.
Highly Commended—Miss L. Lang. Frock.
Highly Commended—Miss P. Watson. Frock.

Class D. *Miscellaneous Handicrafts—*

Rugs—
Prize—Miss Spink.
Highly Commended—Mrs. Burvill-Holmes.

Leatherwork—
Highly Commended—Miss Joiner Bag.

Wool Embroidery—
Special Prize—Miss M. Wilson ..... Bedspread.
Special Prize—Mrs. Trick ..... Fire Screen.
Special Prize—Miss H. S. Angove Chair Seat.
Highly Commended—Miss F. Broome Cushion Cover.

Miscellaneous Embroidery—
1st Prize—Miss G. Corder ..... Runner.
2nd Prize—Miss P. Lane ..... Dinner Mats.
Highly Commended—Miss Boyes Two Children's Coatees.
Highly Commended—Miss Harries-Jones Picture.

Section 2.

Class B. *Embroidery—*

1st Prize—Miss Harries-Jones ..... Cushion Cover.
2nd Prize—Miss C. M. Roberts ..... Runner.

RESULT OF BALLOT FOR MEMBERS OF COUNCIL FOR THE ENSUING YEAR.

Three Hon. Members of Council—
The Viscountess Goschen.
Mrs. E. C. Hughes.
Mrs. Eric Scott.

Choral and Dramatic Society—
Sister Surgery (Miss Matthews) re-elected.
Sister Dorcas (Miss Lloyd) re-elected Deputy
Nurse M. E. Lloyd.

Swimming—
Sister Ethel (Miss Waller).
Nurse Stainforth.

Library—
Sister May (Miss Cawthorne) re-elected.
Nurse Barford, re-elected.

Garden—
Sister Agnes (Miss West), re-elected.
Miss M. L. Hall, re-elected Deputy.
Nurse C. D. Beardmore.

Needlework—
Sister Rosalie (Miss Dreyer), re-elected.
Staff Nurse Bullock, re-elected.

Tennis—
Sister Bright Annexe (Miss W. Johnson), re-elected.
Nurse Payne.

Debating—
Sister Dorothy (Miss Holland), re-elected.
Nurse M. Marriott.

Photography—
Sister Florence (Miss Taylor).
Nurse A. B. Merson, re-elected.

Guy's Hospital Gazette

(Established 1872)

Published on alternate Saturdays. Price 9d.

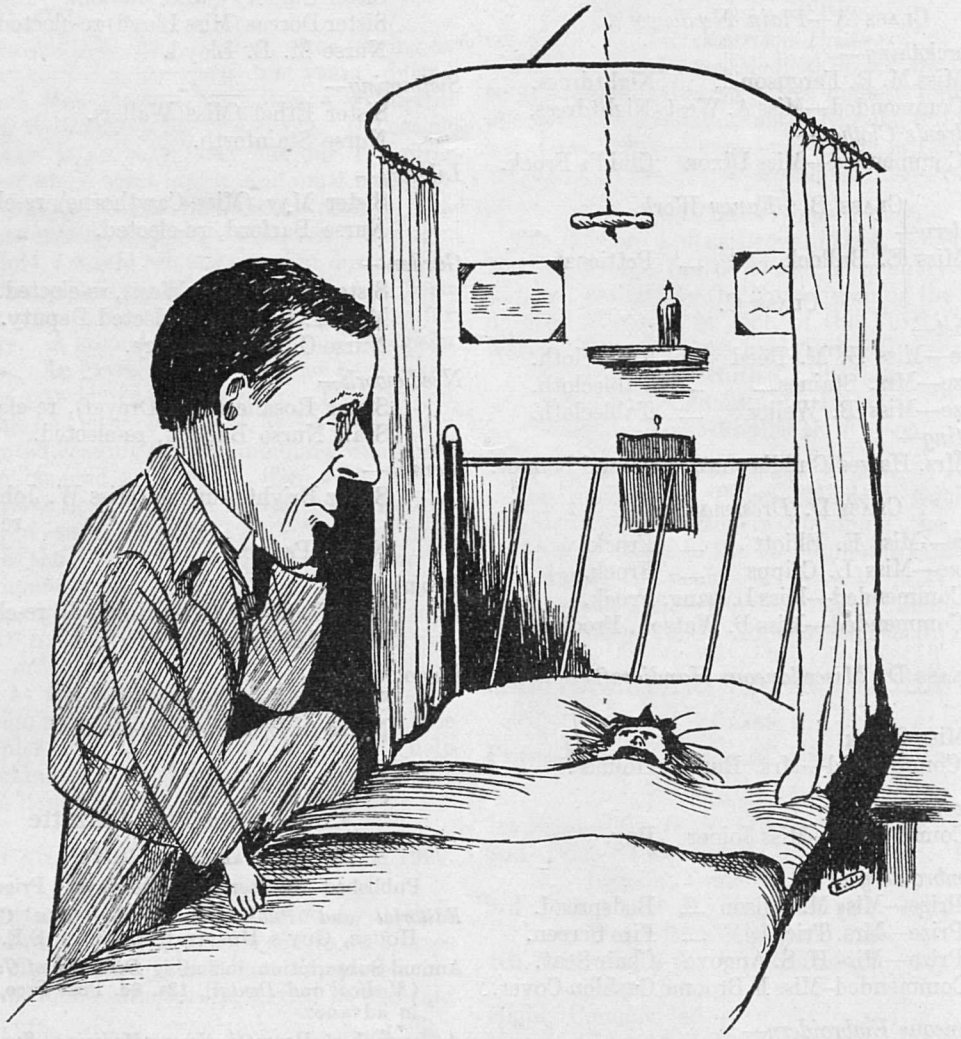
Editorial and Publishing Office :—The Counting House, Guy's Hospital, London, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, 12s. 6d. Post Free, payable in advance.

A Journal of Hospital News, Medicine, Surgery and Dentistry

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the Gazette can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

"COMBINED ROUND"—CASE III



A. F. H.—An Alimentary Anecdote

Stainless Steel

By A. G. Taylor, Esq., L.D.S.

THE introduction of the alloys known as stainless steels, in recent years, has already had a marked effect on the practice of dental surgery. The advantages of stainless steel are so manifest that it is not necessary to enumerate them at great length. In the case of forceps and excavators the stainless steel cutting edges are unaffected by boiling, whereas carbon steel edges become rusted and blunt. Some types of stainless steel are quite unaffected by the oral fluids and foodstuffs, so that they may be used in the mouth in the shape of prosthetic and orthodontic appliances. In the annual report of the London and Counties Medical Protection Society, the use of stainless steel needles is advocated as they are more flexible than those made of carbon steel which, on account of their size, are difficult to temper.

Stainless steels are of two main types—martensitic and austenitic, according to their crystalline structure. The martensitic steel contains 14 per cent. of chromium and a small varying percentage of carbon. It is capable of heat treatment and it is typified by " Firth Stainless," so well known as a cutlery steel. This steel is used for the fabrication of dental and surgical instruments, as its properties are much akin to a carbon steel in that a cutting edge of reasonable hardness can be produced. Instruments made of this steel are uninfluenced by boiling, but are attacked by some foodstuffs such as milk, oranges and salt. The austenitic steel contains 18 per cent. of chromium and 8 per cent. of nickel, and can only be hardened by cold working, as it becomes annealed when subjected to heat treatment. This type, represented by "Firth Staybrite " and Krupps " V2a," is much more resistant to corrosion than the martensitic steel, being entirely uninfluenced by the oral fluids and everyday foodstuffs: consequently, Staybrite steel can be widely used as a substitute for gold alloys in the construction of denture bases, springs and swivels, shell crowns and clasps in prosthetic dentistry and for finger springs, cribs, labial and lingual bows, mouth shields and retention plates in orthodontia.

The technique of swaging, soldering, descaling and polishing Staybrite steel appliances are not as yet well known so a few notes on these matters may be of interest.

Swaging.—Staybright steel is readily swaged by the same processes as gold swaging. When, by working, the steel becomes hardened it may be softened by heating to a temperature of 1,150°C. (yellow heat) followed by rapid cooling either in air or water. Prolonged heating at red heat may, however, cause the precipitation of a constituent along the crystal boundaries with subsequent corrosion and mechanical failure and is consequently to be avoided.

Soldering.—Borax is not a suitable flux for soldering staybrite steel as the large amount of water of crystallisation prevents the formation of a protective film before insoluble oxides have formed on the surface of the steel. A flux consisting of equal parts of boracic acid and potassium fluoride fuses very readily and maintains a clean surface until a peculiar black oxide is formed at a temperature of about 1,000°C. Silver soldering can, however, be readily carried out with the use of this flux, as this high temperature is unnecessary and the silver flows easily. As there is danger of forming the black oxide when fusing high carat gold solders, it is advisable to add borax to the special flux after a protective film has formed. Gold soldering is rather difficult as the gold does not flow well and it may ball up and run about before collapsing. It is best after fluxing to cover the joint with solder and to heat rapidly and uniformly. Soft soldering may be performed with a flux consisting of a saturated solution of zinc chloride in a 50 per cent. solution of hydrochloric acid.

The joining of finger springs to a staybrite steel bow in the construction of orthodontic appliances offers difficulty. If the hard-drawn wire is hard soldered, it becomes softened and its yield point drops from 30 to 20 tons per square inch in the neighbourhood of the joint while there is often softening if the joint is spot welded. This difficulty may be overcome in three ways :—

(*a*) By rehardening the spring, either by manipulation or rolling;

(*b*) By so forming the spring that there are no lateral strains in the neighbourhood of the joint, viz.: the spring works in the same straight line as the softened portion.

(*c*) By using the joint as anchorage and by making the spring work from a suitable fulcrum, such as a sleeve soldered to the bow away from the anchorage.

Descaling.—The black oxides can be removed in a descaling bath consisting of—

Water	50	parts by volume.
Hydrochloric acid	50	parts by volume.
Nitric acid	5	parts by volume.
Restrainer	0.5	parts by volume.

The restrainer is one of a class of organic compounds which inhibit attack on the metal without having any material effect on the removal of scale.

Polishing.—The polishing of staybrite steel appliances is best commenced with a rubber disc impregnated with carborundum and a good finish is obtained if the polishing is continued in the usual manner with pumice, whitening and rouge.

In the mouth staybrite steel is extremely clean and with a mirror polish it is almost invisible as it reflects the colour of the surrounding tissues ; it is tolerated very well and its strength allows a reduction in bulk very welcome to the patient.

I am indebted to Mr. C. C. Hall of the Brown-Firth Research Laboratories for much of the data and information contained in these notes.

Three Cases illustrative of the Value of Ante-Natal Observation of Pregnant Women

The British Medical Association Prize Essay, 1930. By J. J. Chamberlain

INTRODUCTION.

BY ante-natal care is meant the systematic examination of pregnant women. It has major and minor aims ; the former include the early recognition of conditions which may complicate pregnancy and the institution of appropriate methods of treatment. The minor aims, with which we are little concerned here, are none the less important, and seek to establish a general ante-natal system of hygiene for every woman, so that due attention may be given to such factors as diet, clothing, exercise and the avoidance of constipation. It is significant to note that while the infant mortality rate in England and Wales, during the last fifty years, has, roughly speaking, been halved, there has been very little decline in the maternal mortality rate during the corresponding period.

It is estimated that in England and Wales alone, 3,000 women die annually in child-birth ; and besides those who actually lose their lives there are a very large number who, as a result of complications in pregnancy or labour are permanently incapacitated to a greater or lesser extent.

I would also point out that the infant mortality rate for the first month of life shows very little reduction in comparison with the rates for longer periods of life. It cannot be doubted that many of these early infant deaths are due to injury or disease contracted during pregnancy or labour.

The grave, and at the same time hopeful, feature of this enormous loss of life is that in the majority of cases by the introduction of ante-natal care, the complications leading to death or injury can undoubtedly be avoided. The following indicates some of the complications contributing to the upkeep of the high maternal and early infant mortality rate which are almost entirely preventable by careful ante-natal observation.

1. Most cases of obstructed and difficult labour.
2. The " toxæmias " of pregnancy.
3. Fœtal death due to disproportion, malpresentation, " toxæmia " and syphilis.
4. The serious complications resulting from the effects of pregnancy and labour on such intercurrent maternal diseases as chronic nephritis, pulmonary tuberculosis and heart disease.
5. Puerperal infection, which is so frequently the result of difficult, delayed labour and late operative interference.

This group of complications well illustrates how extensive is the range and application of ante-natal work, for it includes most of the conditions which lead to disaster in pregnancy and child-birth.

While I am not suggesting that lack of ante-natal care is the only factor contributing to the all too frequent occurrence of obstetrical complications—for the relative training, skill and experience of the attending medical practitioner must have some influence for good or evil—I do think that in all probability it is the most important one. The future will, I think, prove this point beyond dispute.

" Prevention is better than cure " is a well-worn medical aphorism, but there is, I think, no other branch of medicine to which it can so truthfully be applied as to obstetrics. This contention will, I hope, be clearly demonstrated by the cases described in this essay, which, while illustrating the general principles of ante-natal observation and treatment, possess interesting and unusual features in themselves.

Case I.

A remarkable rachitic type of pelvis, necessitating delivery at term by classical Cæsarian section.

Clinical History—K.F., æt. 27. 1st gravida.

24th April, 1929—Patient first presented herself for examination at the ante-natal department.

Previous History—Patient had suffered from rickets as a child, no other disease of importance.

Present Pregnancy—Menstrual history normal. Date of last period, September 19th, 1928. Date of expected delivery, June 26th, 1929.

Examination—A general examination did not reveal any signs of active disease. The patient was distinctly undersize, however, and exhibited a

remarkable degree of "bowing" of the tibia, as illustrated in the figure. The duration of the pregnancy was estimated at 31 weeks.

20th June, 1929. The case was again examined and the decision to perform Cæsarian section was confirmed.

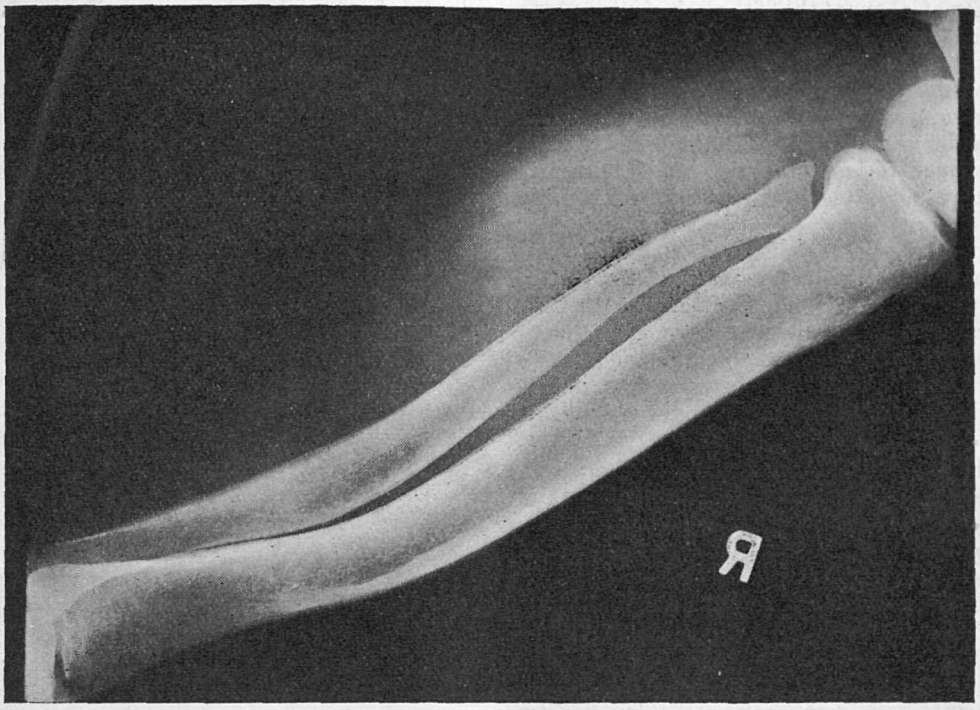


Fig. 1.—Radiograph from Case I showing Rachitic Deformity of Tibia and Fibula.

The pelvic measurements were found to be—Interspinous, 11 in.; Intercristal, 11 in.; Ext. Conjugate, 7 in.; Diagonal Conjugate, 4 in.; True Conjugate (estimated) 3 in.

It was decided to admit the case to the ward on the 28th of May for examination under a general anæsthetic in order to ascertain definitely if there would be any possibility of inducing premature labour.

22nd May, 1929—Case again examined at ante-natal centre. Vertex presentation, right occipito anterior position. Head extended and will not enter brim. Fœtal heart heard.

25th May, 1929—Case admitted to obstetric ward and examined under anæsthetic. The head was floating above the brim and could not be made to engage. A radiograph of the pelvis elicited the report "that the presentation was a vertex and that the pelvis appeared to be of a flat type." Patient was discharged and instructed to return in a month for operation.

19th June, 1929. Readmitted to ward. Vertex presentation—right occipito-anterior position—head floating.

24th June, 1929—Under a general anæsthetic a lower segment Cæsarian section was performed, the placenta and membranes were removed intact, and patient was delivered of a living male child, weighing 5 lbs. 8 ozs. Apart from an attack of bronchitis the mother made an uneventful recovery.

17th July, 1929—Mother and child discharged in a satisfactory condition.

This case very clearly illustrates several important points in pre-natal work. At the first examination there were three main signs which indicated the probability of pelvic abnormality; they were, the small size of the mother, the deformity of the leg bones, and the equality of the interspinous and intercristal measurements. Internal pelvic examination then revealed that the diagonal conjugate was less than four inches and that signs of very irregular ossification were present in the sacral vertebræ.

It is important, I think, to note that at this first visit the extreme degree of pelvic contraction was recognised, and that a provisional, although very definite, idea of the ultimate treatment that would

be required was formed, namely, Cæsarian operation at term.

In most cases of contracted pelvis, two other methods of treatment are also considered; the induction of labour at the 36th week of intra-uterine life and "trial labour." In this case it did not appear that induction of labour at the appropriate time would be possible, but disproportion is a relative term and it is frequently quite impossible to state definitely that a given fœtal head will not pass through the maternal pelvis; therefore the patient was admitted to the ward for examination at the 36th week.

A further point of note is that frequently examination of cases under an anæsthetic at about the 36th week facilitates the diagnosis between those cases which can be made to engage and will probably "mould" the required amount without undue damage, and those cases which will not. Even then a few cases will be encountered in which resort will be made to the method of "trial labour."

In the case under consideration the head would not engage at the 36th week, and examination under an anæsthetic revealed a considerable degree of disproportion; "trial labour" was, of course, quite out of the question and as there was no contra-indication, Cæsarian section was the only justifiable method of treatment.

Although clinically it is usual to estimate the size of the pelvis by the measurement of certain fixed points, it is quite realised that while acting as useful guides, such measurements are only approximate and by no means infallible. Even with accurate clinical mensuration cases occur in which it is extremely difficult to appreciate the extent of disproportion and the size and shape of the pelvic brim. In such cases it has been suggested that much help may be obtained from radiographs of the pelvis taken by a special technique, the aim of which is to produce an undistorted picture of the actual shape of the pelvis with the minimum magnification.

In the present case the antero-posterior view of the pelvis obtained before delivery did not give any indication of the actual shape or size of the pelvis; unfortunately it was not possible to obtain any further radiographs during pregnancy.

Later, however, three radiographs of the pelvis were taken, on different occasions, using a modification of the Parallel Planes method as described by Roberts.[1] The principle of the method is that the brim of the pelvis is placed parallel to the X-ray film and the central ray is made to pass vertically through the centre of the pelvic brim. The film is placed on the tray of a Potter-Bucky diaphragm, upon which the patient sits in a semi-recumbent position. By measuring the pelvic diameters on the radiograph and calculating a simple sum in proportion as illustrated in the accompanying diagram, it is claimed that the actual pelvic measurements may be estimated to within a small degree of error.

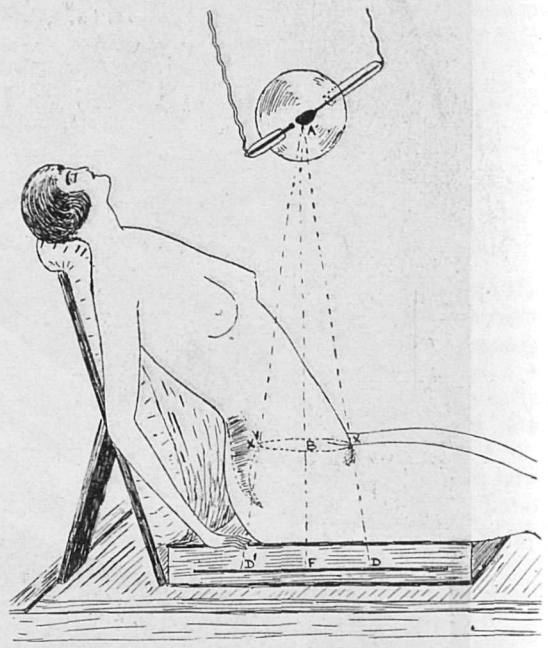


Fig. 2.—Showing position of Patient and Tube. The pelvic brim being horizontal, XX′ : DD′ = AB : AF, *i.e.*, $XX' = \frac{AB}{AF} \times DD'$.

Using this method the radiographs obtained indicated very clearly the actual shape of the pelvic brim and the results obtained by simple calculation were remarkably constant, when it is remembered that those concerned had no previous experience of pelvic mensuration by radiographic methods.

The actual radiographic diameters measured were as follows:—

Radiograph No.	*Transverse Diameter*	*Oblique Diameter*	*Ant.-Post. Diameter*
1	7 ins.	5 ins.	3.6 ins.
2	6.75 ,,	5.25 ,,	3.5 ,,
3	6.75	5.25 ,,	3.75 ,,
Calculated "actual" diameters from No. 3	=5.8 ins.	4.5 ins.	3.2 ins.

In one instance a small measured length of wire was attached to the skin in the plane of the pelvic brim, it was hoped that by this means a more accurate estimation could be made. Unfortunately owing to a technical error the shadow of the wire

was not reproduced in the radiograph and no further opportunity of repeating the experiment occurred.

While the results recorded in the case are, I submit, reasonably accurate and of value it must be emphasised that they are only of value in so far as they aid diagnosis by giving a more accurate idea of pelvic deformity than could otherwise be obtained. Particularly is this true with regard to the shape of the pelvis, as is very clearly demonstrated by the accompanying picture of the pelvis of this patient.

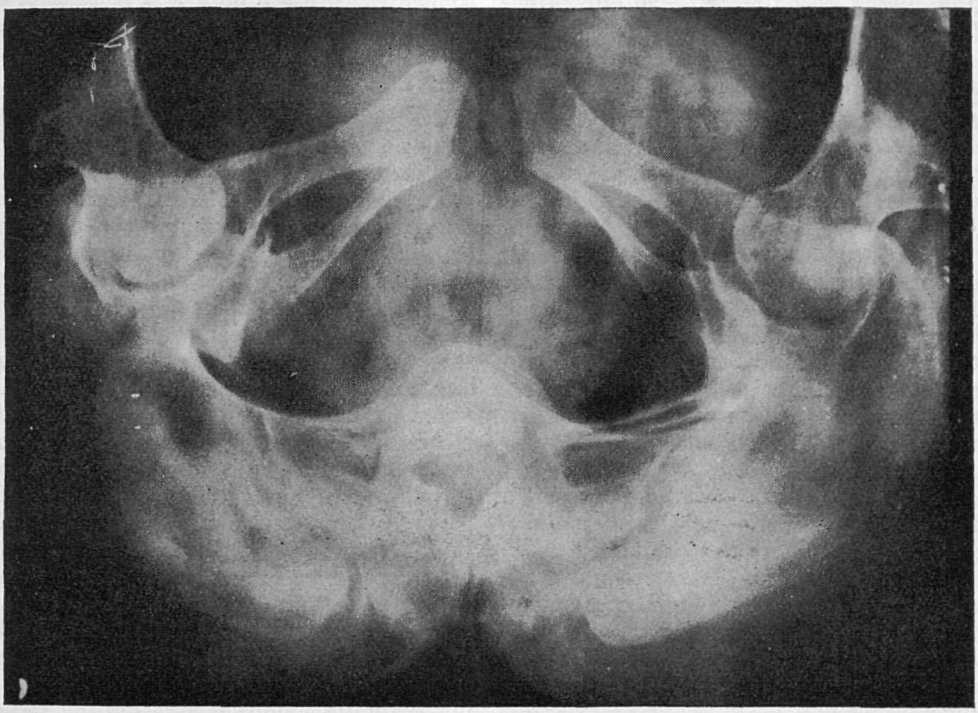


Fig 3.—Radiograph of Pelvis from Case I. Marked Rachitic Deformity.

It shows very well the general degree of deformity and especially the small size of the pelvic brim, with the contracted antero-posterior diameter and increased transverse measurement producing a reniform shaped brim.

The great value of ante-natal observation in this case resulted in the patient having a deliberate Cæsarian section at term with a maternal mortality risk of about 1.5 per cent. In the absence of such observation we can well imagine what would have happened; the operation would probably have been performed as an emergency, with the possibility of sepsis from the application of forceps and internal examination, entailing a maternal death rate of about 25 per cent. The value is further indicated by the fact that the fœtal mortality in cases of this type allowed to come to term untreated is four times as high as in those who receive ante-natal care.

While this case represents an extreme degree of disproportion illustrating a type of pelvis not frequently seen, the general principles of observation and treatment which have been enumerated apply to all classes of this condition and particularly is this true of the minor degrees of contraction, in which lack of ante-natal care so frequently leads to disastrous results.

It is noteworthy, in that it applies mainly to cases of this group, that Holland[2] in his recent enquiry into the cause of fœtal death, elicited the fact that more fœtuses are killed as a result of complications in labour than die from fœtal or maternal diseases during pregnancy.

This then is an example from that large group of cases in which mechanical factors complicate pregnancy, and in which by ante-natal care and skill disastrous results can almost entirely be eliminated.

Case II.

Illustrating a disease peculiar to pregnancy, but complicated by a malpresentation.

Clinical History—R.G., æt. 27. 2nd gravida.

Previous History—

General Medical History—No diseases of importance, particular inquiry for history of rheumatic or scarlet fever.

Past Pregnancies—20th June, 1927. Admitted to hospital for eclamptic fit during labour. Œdema of legs and ankles: urine solidified on boiling. Forceps delivery under anæsthetic—male child. Blood-pressure after delivery 148/120. Albumin 5 pts. Patient had one post-partum fit.

21st June, 1927. Child died from intra-cranial hæmorrhage.

2nd July, 1927. Blood-pressure 120/110. Albumin nil.

5th July, 1927. Patient discharged feeling quite well.

Present Pregnancy—

Ante-Natal Observation—28th February, 1929. First attendance for examination. Menstrual history showed no abnormality. Date of last period, August 2nd, 1928. Expecting about 9th May, 1929. General examination revealed no abnormality. Pregnancy estimated at 29 weeks. Urine 1012 ; acid reaction—no albumin.

1st March, 1929. General examination nil. Patient now has slight œdema of ankles. Blood pressure 120 mm. systolic. In view of past history of eclampsia it was decided to admit case to ward for confinement. Advised to attend every week for examination of urine, etc.

15th March, 1929. Urine—acid, no albumin.

22nd March, 1929. Urine—acid, no albumin.

19th April, 1929. Pregnancy estimated at 36 weeks. Breech presentation—left sacro-anterior—external version failed. Urine—acid, no albumin.

3rd May, 1929. Marked œdema of ankles—pregnancy now 38 weeks, no history of recent headaches. Blood-pressure 156/80 mm. Urine—acid, albumin present.

Case admitted to Ward—5th May, 1929. Examination did not reveal any sign of heart disease—œdema of ankles present—Blood-pressure 142/110 mm. Albumin present. Patient put on a first stage albuminuria diet. Patient was considered to be in a dangerous pre-eclamptic condition and it was decided to terminate the pregnancy and attempt version.

5th May, 1929. 12 noon. Under general anæsthesia, external cephalic version and induction of labour with an animal bladder was performed. Labour pains started at 2 p.m. and spontaneous delivery was completed at 8.35 p.m. Living male child, 7 lbs. 1 oz.

11th May, 1929. Condition satisfactory—on the 4th day the temperature had risen to 101.2° and pulse to 100, this was considered to be due to an influenzal cold.

12th May, 1929. Blood pressure 130 mm., no albumin, patient's condition good.

15th May, 1929. Blood-pressure 114/82 mm., no albumin.

17th May, 1929. Blood-pressure 116/84 mm., no albumin.

21st May, 1929. Blood-pressure 114/84 mm., no albumin.

Mother and infant discharged in satisfactory condition.

To illustrate the value of ante-natal observation in this case, I propose to review briefly the various complications which presented themselves and the methods of treatment instituted in the hope of preventing serious maternal and fœtal damage.

Eclampsia—

The popular beliefs, that eclampsia does not occur in subsequent pregnancies and that one attack confers a degree of immunity, have no scientific foundation. They have arisen, I presume, because eclampsia is fortunately a rare condition, and the chances of one patient having two attacks are many thousands against. Such cases, however, do occur from time to time.

While the great majority of eclamptic cases pass through a premonitory stage, exhibiting such classical features as headache, disturbance of vision, nausea, vomiting, albuminuria and rising blood-pressure, etc., the presence of all or even most of them is not necessary for the establishment of a diagnosis. Indeed, I know of one case of post-partum eclampsia in which the patient died within twelve hours of delivery, and the only indication of the condition was an eclamptic liver demonstrated at autopsy.

While I do not suggest the danger of eclampsia was of paramount importance in the present case, the signs present undoubtedly indicated a definite pre-eclamptic condition necessitating termination of pregnancy.

The continuation of the pregnancy to term, would, I think, have given these remarks more value than they may appear to possess, and in support of this contention I would mention two authentic cases in which examination a week previous to the attack of eclampsia, revealed no signs or symptoms at all.

The purpose of ante-natal care, however, is the prevention and not the production of complications.

Albuminuria of Pregnancy—

From the recent work of Gibberd[3] it appears that recurrent albuminuria associated with pregnancy, such as occurred in this case, is due to two factors. The first, a degree of " latent " nephritis resulting from " toxæmia " in a former pregnancy, and the second, a degree of toxæmia due to the present pregnancy.

It has been shown that the duration of the "toxæmia," as evinced by albuminuria and raised blood-pressure is, in many cases, an important factor in the production of permanent renal damage. The longer the duration of the "toxæmia" the greater the liability to, and the more severe the degree of, permanent renal damage. Considering the present case, while it is possible the patient sustained no permanent renal damage as a result of her former pregnancy, it is probable that some degree of "latent" nephritis resulted, which, while not apparent during the intervening period, became apparent as a result of the subsequent pregnancy. Whether or no the patient did actually sustain renal damage as a result of the first pregnancy, it was obvious that some unknown factor was at work in the second one, producing a condition of "toxæmia." Of the nature of this factor we have no idea, but we do know that by the termination of pregnancy its effects are removed.

Therefore with a 39 weeks' fœtus there could be no reason to continue a pregnancy which was throwing an increasing strain on the maternal renal system and probably producing permanent damage.

Chronic Nephritis—

Some authorities state that it is unusual for this condition to result from eclampsia; in so far as most cases of eclampsia are of brief duration this is true. The important factor is the duration, of the preceding albuminuria, which is present in the majority of cases.

While it was not possible in this case to ascertain the duration of the albuminuria associated with the first pregnancy, it is probable that it was sufficient to produce some degree of chronic nephritis which was subsequently demonstrated by that most delicate test for renal damage, namely—pregnancy.

Under the circumstances the risk of an increased degree of chronic nephritis was one that could not justifiably be taken.

Breech Presentation—

The dangers attendant on a breech labour were perhaps the most obvious complications of this case. I use the word obvious advisedly, for whereas the dangers of breech labour have been recognised, to some extent at least for many years, the danger associated with recurrent albuminuria of pregnancy have only recently been demonstrated.

Breech presentation is the commonest of all the malpresentations and is associated with a high degree of fœtal mortality, the result usually of too rapid delivery of the head causing tentorial tears and thus producing intra-cranial hæmorrhage,

It is interesting to note, that in a series of 49 obstetric cases delivered during a month's externship on the Guy's "district," only one fœtal death occurred. This was the result of a breech labour in a multipara 9, who had only attended once at the ante-natal clinic when about thirty-three weeks pregnant. At autopsy intra-cranial hæmorrhage, the result of tentorial tears, was demonstrated.

In this particular instance, ante-natal observation during the later weeks of pregnancy would undoubtedly have resulted in a living child.

External Cephalic Version—

The danger to the fœtus in breech presentation is so great, both in primiparæ and multiparæ, that every care and effort should be taken to convert the presentation into a vertex. For increased skill in delivery is not to be compared with the simpler method of version, if one is to judge from results.

External version is, in the majority of cases, the method of choice and it is best performed at the 32nd week; the maternal and fœtal danger, in experienced hands, is almost negligible.

In the case under consideration it was unsuccessfully attempted without an anæsthetic at the 36th week. A second attempt in the ward under an anæsthetic was successful, thus reducing the risk of fœtal mortality from something like 20 per cent. to an almost negligible amount, disregarding altogether the risk of maternal injury which is not inconsiderable.

Induction of Premature Labour—

The instrumental induction of labour in complicated pregnancies is a frequent operative procedure at the present time, and it is probable that it will become even more frequent in the immediate future if advances in technique diminish the risk entailed in the operation.

It is apparent that induction with an animal bladder, which has been practised fairly extensively at this hospital, is one of, if not the most, suitable method in use at the present time.

It has been found by comparison with other methods to be much quicker, and this time factor is frequently of first-rate importance when considering, for example, the induction of labour in a pre-eclamptic patient. It has been shown in a recent publication[4] that the average latent period for induction using this method, is less than half the period which elapses when stomach tubes or bougies are used.

The latent period of induction in the case under consideration was only two hours—a very short period—the average period with this method being about 13 hours.

This method also possesses the advantage of a good aseptic technique, which is of paramount importance, for when foreign bodies are introduced into the uterus the danger of sepsis is an ever-

present factor and one which even in this method does occasionally result in a certain amount of maternal morbidity.

It has not been possible in this case to demonstrate the beneficial results of diet treatment, as illustrated by a fall in blood-pressure and diminution in the amount of albumin, for the patient was only warded a few hours before labour was induced.

It is significant, in that it illustrates, first, the removalof some factor present during the pregnancy and presumably responsible for the "toxæmic" condition, and, secondly, the benefit of treatment, that five days after delivery the urine was quite free from albumin, and that by the tenth day the systolic pressure had fallen to 114 mm. of Hg.

There are three points I wish to emphasise—

1. That by an operative procedure entailing but little risk, *i.e.*, external cephalic version, the risk of maternal damage and fœtal mortality was very much reduced.

2. That the induction of labour, while accompanied by a certain degree of risk, was more than indicated by the maternal condition, predisposing as it did possibly to eclampsia and more certainly to chronic nephritis.

3. Finally, without careful ante-natal observation the indications for active operative interference would not have been realised, and therefore such procedures could not have been performed at the optimum time.

Case III.

Illustrating one of the intercurrent diseases frequently associated with pregnancy, which commonly causes complications.

Clinical History—J. T., æt. 40. 9th gravida.

Past History—14th August, 1928. Patient admitted into hospital for investigation of abdominal pain and repeated abortion.

General Medical History—Good, no indication of any severe illness.

Menstrual History—13th March or April, 1928. Hæmorrhage profuse, not painful. Miscarriage at four months had occurred in September, 1927; after this the periods were quite regular until the end of June, when patient had a slight hæmorrhage every day for a month.

Obstetric History—Patient has had eight pregnancies with the following results:

1st, 1908—Female child, spontaneous delivery—child now twenty years old and quite normal.

2nd, 1911—Male child, spontaneous delivery—now 17 years old and quite healthy.

3rd, 1916—Female child, spontaneous delivery—died at 4 months, result of fall.

4th, 1917—Abortion at 10 weeks.

5th, 1918—Abortion at 10 weeks.

Patient remarried in 1925.

6th, 1925—Abortion at 1 month.

7th, 1926—Abortion at 3 months.

8th, 1927—Abortion at 4 months.

Patient complains of a left-sided abdominal pain, sharp in nature and coming on at frequent intervals during the day, lasting a few minutes—unaffected by taking of food. Constipated for last 3 months, some dyspareunia has been noticed, also a general feeling of lassitude.

Condition on Admission—Patient looks quite well. On examination some tenderness elicited in L.I.F., and the presence of a lump first felt at out-patients was confirmed. Apart from this there was no evidence of systemic disease.

N.B.—On July 26th—Patient had been examined in the out-patient department where she first presented herself for examination. A tender lump was felt in the Pouch of Douglas and confirmed on examination P.V.; it was suggested that it might be an ovarian tumour.

Investigations—Examination of the urine by chemical and bacteriological methods produced negative results.

Examination of colon with barium enema—negative result.

15th August, 1928. *Examination of blood*—strongly positive ++ Wasserman reaction.

17th August, 1928. On further examination no tumour could be felt, it was considered to have been a fæculent mass in the pelvic colon. The uterus was not fixed or enlarged, but was slightly tender. Patient discharged and advised to attend for anti-syphilitic treatment.

Anti-syphilitic treatment—

22nd August, 1928. On attending at the V.D. department, patient volunteered information which left little doubt that her first husband had contracted syphilis and had infected her; unfortunately the actual time of infection cannot be definitely fixed, most probably, however, it was shortly before the 4th pregnancy.

In view of the fact that she did not appear to be a particularly robust type of patient, and one, in fact, in whom as the result of treatment toxic features might be expected, it was decided to subject her to a course of treatment with acetylarsan, one of the pentavalent organic arsenical compounds.

Course of Treatment—

1st course, August, 1928—January, 1929 : 31 ccs. injected. February, 1929—Wasserman reaction +.

2nd course, March—June, 1929 : 30 ccs. injected. July, 1929—Wasserman reaction +.

3rd course, July 23rd to September 20th, 1929 : 18 ccs. injected.

Patient became pregnant before the commencement of the second course of treatment; the third

course was stopped two months before full term to prevent the occurrence of any toxic complications that might possibly arise.

Admission to Obstetric Ward—15th November, 1929.

After a normal labour patient was spontaneously delivered of a full term living male child, weighing 7 lbs. 11 ozs.

Naked-eye examination of the placenta and membranes did not reveal any abnormality: no histological examination was made.

No blood was taken from the placental end of the cord for examination. The puerperium was quite normal; examination of the child did not reveal any abnormality.

Examination of Maternal Blood. 21st November, 1929—Negative Wasserman and Kahn reactions. Mother and child discharged in satisfactory condition on the tenth day.

Post-Natal Attendance—

23rd December, 1929—Clinical examination of the child did not reveal any indication of syphilis at all, the Wasserman reaction was negative.

Examination of the maternal blood revealed a slight positive Wasserman reaction.

While it is not possible nor indeed desirable to argue from the peculiar features arising in this single case, it is, I think, permissible to discuss the more salient points in the light of the results of recent work on maternal syphilis as a cause of fœtal death.

My contention in the present case is, that the factor responsible for the repeated abortions was the maternal syphilitic toxæmia; and I think the following facts support this contention:—

1. In the first place before the syphilitic factor was introduced the mother gave birth to three full term, normal children. It is extremely unlikely that five early successive abortions would have occurred in the absence of this or some other cause of toxæmia; certainly not as the result of the common incidence of abortion in women.

2. In the absence of any other demonstrable cause, the occurrence of five early abortions after infection with syphilis would indicate this disease as being the responsible factor. In this case the Wasserman reaction was the only positive result of any investigation.

Although syphilis is the most common cause of ante-natal death of the viable fœtus, it is now recognised that as a factor in the production of abortion before the seventh month it has been very much exaggerated. Nevertheless it is still recognised as an important cause of early and repeated abortions, such as occurred in this case. Frequently the only reason for which the patient consults a medical man is the occurrence of repeated, early abortions.

It is perhaps unfortunate that no examination was made of the fœtus in the last abortion, for there is just a possibility that some indication of syphilitic infection might have been found and this would have been a conclusive point.

There can be no doubt that syphilitic toxæmia caused the death of the fœtuses in the other abortions.

3. The increasing length of intra-uterine life observed in the successive pregnancies is typical of what occurs in untreated cases of syphilis. In many instances when completely neglected it leads first to premature birth and then to the birth of a full term child which develops signs of congenital syphilis.

4. The presence of a strong + + Wasserman, which eventually responded to treatment, taken in association with the clinical history, is, I think, strong proof in the first place of the presence of the disease and secondly of a diminution in toxicity as a result of treatment.

5. The birth of a full-term normal child is yet further proof of the establishment of the correct diagnosis, and also a criterion of the efficacy of treatment. For presumably the treatment has resulted in the removal, to a greater or lesser extent, of the toxic factor responsible for the abortions.

The use of the term "normal," in this particular child must for the present be guarded, for although clinically it is quite healthy and the Wasserman negative, some five weeks after birth, until it has been watched and examined for some five or six months it may not truthfully be called normal. The probability of congenital syphilitic manifestations arising is, however, extremely doubtful.

Having, I think, reasonably established my contention, I have at the same time indicated the basis of the treatment, the benefit of which is indicated in the result produced.

It will be noted that no examination of the blood from the placental end of the cord was made at birth, since many authorities and Fildes[5] in particular consider that the Wasserman reaction obtained from such blood is not indicative of syphilis in the fœtus, but of maternal syphilis. It is due to the passage of substances from the maternal blood to the fœtal circulation which are capable of producing a positive reaction. Such substances are considered to remain active for about a month.

It is of interest, that this is the first case, as far as can be ascertained from the V.D. department of this hospital, in which a pregnant woman has been treated throughout on acetylarsan alone, and has subsequently given birth to a full-term normal child.

On the completion of her third course of injections this patient will have received nearly

twice as much pure arsenic, as she would from a corresponding course of N.A.B., with no serious toxic results, the preparation being rapidly eliminated, mainly through the kidneys.

A further point of interest in this case is the quiescent condition of the maternal syphilis, so often observed in women with definite syphilitic infection, during the child-bearing period of life. Although the patient had been infected for the last thirteen years at least, there is no history of secondary lesions or indications of tertiary ones. It appears that there is some unknown factor at work, which holds in check the progress of the disease, since it is commonly observed that after the menopause such tertiary manifestations do occur.

It cannot, I think, be doubted that in this case pre-natal observation has been of great value. In the first place it has resulted in the diagnosis and treatment of a dangerous maternal condition, secondly it has prevented the continuance of the wastage of early fœtal life with its associated maternal damage, and thirdly it has facilitated the birth of a normal child.

From these three cases, it becomes apparent that could such methods of ante-natal care as have been described be extended to the great majority of pregnant women, a considerable reduction in and maternal fœtal mortality would be effected. For at present, such ante-natal observation is limited to the fringe of that vast number of women.

My thanks are due to Mr. McNair and to Mr. Cook for permission to publish these cases, and I am also indebted to Mr. H. M. Worth for advice on radiographic technique.

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4. Gibberd, G. F.—Ibid., 1929, ii, 617.
5. Cruickshank, J. N.—Report on Maternal Syphilis as Cause of Fœtal Death. Ministry of Health.

Annual Rugby Club Dinner

ON Thursday, 8th May, the Rugby Club held its Annual Dinner, Mr. Steward, the President, being present; forty-one others sat down to dinner, including a very welcome guest, Mr. "Bill" Williams, from St. Bartholomew's. The dinner was held at the Bridge House, London Bridge, in the hopes—but Mr. Doherty deals fully with this point in his speech. Anyhow, a very excellent dinner was served at which even Rugby appetites, in or out of season, could scarcely carp.

The health of the King having been loyally drunk, Mr. W. D. Doherty rose to make the speech of greatest moment, finishing with the toast of "The Rugby Club."

In reviewing the past season, we thought he dealt very even justice to the different components of the fifteen, though others thought the forwards won scarcely their full share of recognition. He then told us that the object in dining at the Bridge House had been to increase the number of diners, since expense was less—in this the organisers had met with success, we believe—but so far as he could see, wherever they dined, it was the "regular diners" who came, whatever be the name of the dinner (uproar).

Mr. T. G. Robinson replied on behalf of the Club, and in doing so wished to let us know how much valuable advice the Committee were able to obtain

from Mr. Doherty, a fact which could scarcely be appreciated at its true worth, except by those on the Committee. He also wished to thank the many members of the Staff and especially Mr. Steward, who so regularly gave their support at home matches; win or lose, they always came to see the side win next time.

Mr. A. R. Thompson recalled days of long ago, but very fresh in his memory, when both he and Mr. Steward, also Mr. Layton, played rugger; he spoke with great sincerity of Mr. Steward's amazing keenness, though never of the 1st XV; he said that his own objection to Mr. Steward as President was that, being Chairman of so many Committees, he would have to miss occasional meetings to attend Rugby meetings, dinners, etc., and then the committee meetings in his absence became disorderly and had to be adjourned until he was there to take up the reins of tactful control; the Club could not have a better President.

Mr. W. Lewis spoke for a few moments, but made little impression on Mr. Doherty.

Then Mr. "Bill" Williams was prevailed upon to make a speech. Having heard Mr. Robinson and Mr. Popplewell on previous occasions, and being convinced he had heard the two worst speeches likely to be spoken, he did not mind risking his being classed with theirs. Cup-tie memories were recalled amidst applause, and much praise lavished on the referee of the match.

After one or two further short speeches, and having drunk the health of the Hon. Sec., Mr. A. R. Clarke, people settled down to a merry hour or so before going home to bed.

Correspondence

Medicine—Then and Now

To the Editor of the GAZETTE

SIR,—It is interesting to contrast modern articles on popular medicine with that which I enclose, which appeared in the "One Hundred Years Ago" column of a well-known Sunday paper.

"By means of an instrument called the stethoscope applied to the breast bone, some modern medical writers profess to discover what is going on within. This new art is called auscultation, and the internal sounds pectoriloquism. By means of this new discovery, a learned physician professes to have heard a 'metallic tinkling' at the heart or in the lungs of a patient. A bystander, however, thinks the 'metallic tinkling' was only audible from two pieces of coin which found their way into the palm of the doctor."

Yours, etc.,

J. T. IRVING.

Guy's Hospital,
S.E.1.

Sport

Rugby

THE season of 1929–30 being completed, I have pleasure, as in past years, in enclosing chart and statistics of the 1st XV performances which, while not a record year, show an improvement on last season.

Of the programme of 26 matches arranged, not including Cup Ties, 24 were played; 28 including Cup Ties—therefore only two matches were scratched, *v.* London Irish and Rosslyn Park; a good record for the variable English climate. The match *v.* London Scottish was abandoned ten minutes from time, but is included in these records.

Again, as in the past season, we were the first to lower Birkenhead Park's home record, and another notable success was a win over Aberavon in Wales. If the records given are correct, Hogbin only missed one game, viz., *v.* Birkenhead Park, away, during the whole season, besides converting 24 tries and kicking 6 penalty goals, a fine record; also Lashmore only missed one game, *v.* Bristol at home, the last match of the season.

We scored over a hundred more points this season than last, while our opponents scored nearly a hundred less against us.

It will be noted that the average points per match for and against is almost equal.

In conclusion, the Captain and Team in the Cup Final are to be heartily congratulated on playing what was probably one of the finest Finals seen, and retaining the Cup for Guy's.

The players who took part in the Final are starred in the statistics.

SEASON 1929–30.

The following have taken part in the 1st XV matches during the season:—

*Hogbin, *Lashmore (27), *Batchelor (25), *Malone (24), *Popplewell (23), *T. Morgan, *T. G. Robinson (22), Kunovsky (20), *Johnson (18),

Thomas, *Giesen (17), Howell, *W. H. Lewis (16), Wailer, Atkins, Clogg (13), Smith, A. D. Lewis (12), * G. Morgan (11), *Ryan (9), *Campbell, Fichardt (8), Hale-Monro (7), A. R. Clarke, *Eustace (6), Hall-Smith (5), *O'Shea (4), W. D. Jones (3), Woodivis, Rowlett, Peatfield, P. K. Robinson, Cooper, Littledale, Cochrane, Knight, Hilton, Clegg and Weston (1 each).

The following have scored tries :—

Johnson (12), T. G. Robinson (10), W. H. Lewis (9), G. Morgan (7), Giesen (5), Atkins (4), Ryan, Hogbin, T. Morgan (3), Lashmore, Howell, Thomas, Popplewell, Fichardt, Malone, Batchelor (2), P. K. Robinson, Smith and Clogg (1).

The following have scored goals :—

	Converted.	*Dropped.*	*Penalty.*
W. H. Lewis	—	2	—
Hogbin	24	—	6
Atkins	—	1	—
Wailer	9	—	1
Thomas	—	1	—

making a total of 73 tries—Tries Converted 33 ; Dropped Goals 4, Penalty Goals 7 ; Total Points 322.

Our opponents' score was as follows :—

Tries 68, Tries Converted 31 ; Dropped Goals 3, Penalty Goals 10 ; Goal from a Mark 1 ; Total Points 311.

Therefore the completed figures are :—

Played 28; Won 12, Drawn 1, Lost 15 ; Total Points For 322 ; Total Points Against 311.

Average Points per Match (for) 11.5 ; average Points per Match (against) 11.10 ; Percentage 44.7.

				Points.		*Per*
Season.	*P.*	*W.*	*D.*	*L.*	*F.*	*A.*	*cent.*
1923–24	27	13	3	11	285	151	53.4
1924–25	31	16	3	12	291	230	56.45
1925–26	29	14	3	12	235	234	53.5
1926–27	34	18	3	13	371	294	57.35
1927–28	26	12	3	11	190	206	52.0
1928–29	30	11	1	18	220	404	38.0
1929–30	28	12	1	15	322	311	44.7

ROY C. HOLLOWAY.

Hospital Information, etc.

Pass List

L.D.S., R.C.S.(Eng.).

FIRST PROFESSIONAL EXAMINATION.

May, 1930.

PART I.

Dental Mechanics.

V. P. Betts
R. S. Bruce
J. H. Chignell
J. T. Cramp
J. T. P. Cullingwood
H. N. V. Hathorn
E. R. Heathcote
D. C. D. Mathews
D. K. Ness.
C. G. Palmer
S. R. Peatfield
P. K. Perren
W. F. Rose.
H. J. Redman
A. F. Town

PART II.

Dental Metallurgy.

G. W. B. Bateman
H. B. Christian
H. G. Earnshaw
G. G. Ellis
R. T. Garner
D. K. Ness
P. A. Sloane
W. E. Waite

PART IIIa.

Anatomy and Physiology.

J. Bromley
J. H. de Mierre
W. V. A. Denny
J. K. Donald
B. G. F. Turner
R. J. Eustace
E. J. Freeman
K. E. Lawrence
E. Matthews

PART IIIb.

Dental Anatomy Physiology.

B. Deggots
A. W. Holman
S. J. G. Knott
L. R. Millership
W. L. Mountain
D. J. Rees
J. H. Stevens
J. H. Timpson

SOCIETY OF APOTHECARIES OF LONDON

May, 1930.

Surgery

E. Lethem.

Forensic Medicine

A. L. Thomas.

Midwifery

A. L. Thomas.

Papers by Guy's Men

H. L. Attwater. Catheterization, *Pract.*, cxxiv, 570.

L. R. Broster. (1) Four specimens of duct sarcoma of the breast ; (2) Hydrocephalus in a child. *Proc. R.S.M.*, xxiii, 942.

A. H. G. Burton and A. R. Balmain. Vitamin A and streptococcal antitoxic immunity, *Lancet*, 1930, i, 1063.

P. P. Cole, C. H. Bubb and S. E. Rowbotham. The treatment of fractures of the mandible, *Pract.*, cxxiv, 489.

G. B. Dowling. (1) A toxic condition of undetermined cause ; (2) ? Pseudoxanthoma elasticum, *Proc. R.S.M.*, xxiii, 1041.

E. L. Graff. A case of ruptured ovarian pregnancy, *B.M.J.*, 1930, i, 902.

Sir F. Shipway and J. Blomfield. Discussion on avertin anæsthesia, *Proc. R.S.M.*, 1929, xxiii, 99.

Change of Address

C. A. W. Archer, L.D.S., R.C.S., 8, Lower Sloane Street, S.W.1. *Sloane* 2500.

S. F. Wright, L.D.S., R.C.S., 9, Powderham Crescent, Exeter.

Appointments

E. F. Wilson, F.R.C.S., Hon. Assistant Surgeon to the South Devon and East Cornwall Hospital, Plymouth

R.A.M.C.

Major-General H. P. W. Barrow, Director of Hygiene, War Office, relinquishes his appointment.

Birth

PARSONS—On May 21st, 1930, at 11, The Circus, Bath, to Dorothy, wife of Dudley A. Parsons, L.D.S., R.C.S. (Eng.), the gift of a son.

EDS. { J. B. B. / P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *14th June* 1930 — *Number* 1093

PASSIM

DISSATISFACTION with present achievement, which after all is the reason of all progress, has in recent years been particularly in evidence in the realm of anæsthesia. In the search for a drug that is purely selective in its action, that is non-toxic in effect, and that allows of a comfortable induction of anæsthesia, experiment has been made with many substances. The most recent, avertin is perhaps the most satisfactory; induction is beyond doubt without terror or discomfort for the most timid of patients; provided it is not administered in the face of hepatic deficiency, it is non-toxic; and its action is chiefly selective, producing a depression of the cerebrum, simulating sleep, which lasts sufficiently long to render comfortable the hours immediately following operation. At the same time—perhaps it is pure conservatism showing itself—we believe the superior to chloroform and ether as routine anæsthetics, more especially in abdominal surgery, has yet to be found.

Perhaps the greatest asset of chloroform and ether is the readiness with which they are absorbed into and eliminated from the system. The enormous expanse of the alveolar surface of the lungs enables such ready interchange between the gases of the alveolar air and the gases in the blood, that the smallest variations in dose may be achieved with the utmost readiness. Herein lies the ease with which the depth of anæsthesia is at the control of the administrator, according to the needs of the surgeon or the condition of the patient; furthermore, herein lies the proved safety, if not of chloroform, at least of ether, for what matter if the amount requisite for adequate anæsthesia be over 50 per cent. of the fatal dose if such ready elimination is possible. Drugs administered by any other route, mouth, rectum or intravenously, once given are only slowly excreted; consequently, the margin of error must ever be kept wide. Yet again, except in the most nervous of patients, the terrors of induction and the discomforts following the return of consciousness, we fancy, lie to a great extent in the hands of the anæsthetist; maybe we are biased, but it is our impression that less than 50 per cent. of hospital patients suffer from post-anæsthetic vomiting where chloroform or ether have been properly given by someone with experience. Naturally, it will take many years before a sufficiently wide knowledge will be obtained of a drug such as avertin so that relative dangers from overdose can be truly estimated. The bugbear of pulmonary complications is ever difficult to assess, in some instances it is no doubt chiefly due to the anæsthetic, in others, as illustrated by those following spinal anæsthetics it is evidently the result of other factors, often the disease necessitating operation.

If we have appeared too partisan in our inexperienced remarks, we regret it, but our love for the art of anæsthesia, founded on the exposition of chloroform and ether, has in the face of recent developments made us reflect how well suited they are for their purpose. Also we had been a little taken aback at the strong dissatisfaction with the present position of anæsthesia which Sir Francis Shipway expresses in his recent letter to the *Lancet*, his dissatisfaction is no doubt that of the scientist, who is ever in search of perfection; in avertin we would quite agree that a new and valuable drug has been put at our disposal, how valuable, it is as yet, still difficult to say.

▭

IT is with considerable pleasure that we offer our heartiest congratulations to Miss Emily MacManus, who received the O.B.E. in the recent Birthday Honours List.

Nursing at Guy's has always lived up to a very high standard, and this is largely due to the unremitting care and attention to detail, and the flair for organisation, which have been the distinctive traits in the characters of recent generations of Guy's

matrons, attributes which Miss MacManus shares to a high degree with her predecessors. It is always with satisfaction that one sees an honour awarded which is so thoroughly deserved.

▭

It is almost alarming to contemplate the extraordinary skill with which the medical student seems to be able to collect money, for should these budding practitioners apply the same faculty for money making when they have, as it were, launched themselves upon an unsuspecting public, should they concentrate with the same perseverence on the collection of their fees, the unintentionally casual, but nevertheless virtually welshing patient will have no chance at all. We commend with enthusiasm all those who helped to "swell"—alas we fear, an unjustifiably euphemistic word—the coffers of the Appeal Committee to the extent of £203 on the occasion of the annual Derby Day Street Collection.

For the past three months we have cast a wondering eye upon the prospective garden outside Esther, have heard the cats of a night at play among the struggling plants, and yet each morning found the survivors still gamely fighting their battle with Borough air and Hospital soil. Now, just when the crowning achievement of flowering is about to happen, we hear that the rumoured "garden" party, staged in the Park, is this year boycotting the garden, and after all will not be held.

▭

We have been asked to announce that the Ninth Annual Dinner of the Thirty Club is being held at Gatti's Restaurant on Friday, June 20th. Will any member who has not yet replied, kindly do so by return, to the Hon. Secretary, Dr. J. J. Conybeare, Warden's House, Guy's Hospital, S.E.1.

Cancer of the Œsophagus

A Clinical Lecture by E. G. Slesinger, Esq., O.B.E., M.S.

Gentlemen,—Cancer of the œsophagus is a good deal commoner than we are perhaps inclined to believe, and it constitutes somewhere about 7 to 10 per cent. of all cancers found in man, and approximately 1,600 deaths from this disease occur annually in England and Wales, of which 1,200 are in males and 400 in females.

No more is known about cancer in the œsophagus than about cancer anywhere else, excepting that the factor of chronic irritation which we recognise as one of the factors in cancer production is apparent in the fact that most of the patients give histories of bolting their food, that almost all have dental sepsis, and that many have taken alcohol to excess. Men are more commonly affected than women in a variable proportion of about 3 to 1, and in men the disease occurs chiefly between the ages of 50 and 70, while in women, the age incidence is slightly lower.

As regards situation in the length of the œsophagus, cancer tends to occur in those situations where there is a physiological narrowing. Not a narrowing that is constantly present, since at rest the œsophagus is collapsed, but a relative narrowing when the tube is dilated as in the passage of a bolus of food, this lending further colour to the view that irritation is one of the predisposing factors. The three sites of such narrowing are at the commencement of the œsophagus, at the level of the tracheal bifurcation and at the lower cardiac end of the œsophagus, where it passes through the diaphragm. There is considerable divergence in the figures of different observers as to the relative frequency of these three sites, but it is generally agreed that cancer in the upper half is less frequent than in the lower half. Probably the region of the tracheal bifurcation is the commonest situation, followed by the lower end, while cancer at the beginning of the œsophagus is the least common of all. A very remarkable fact, first pointed out by Rolleston, is that in women the upper end of the œsophagus is the site of the growth far more commonly than the rest of the tube, an observation which has been confirmed by Hacker, Vinson and others.

Pathologically, the most usual type of carcinoma of the œsophagus is a squamous-celled growth, remarkable for the number of cell nests present. A far rarer adeno-carcinoma arises from the glandular elements of the œsophagus and presents an alveolar arrangement of cells, while occasionally a columnar carcinoma is seen, usually invading the œsophagus from the stomach. Sarcoma is rare, but does occur, being found in 2 out of 30 cases investigated in the Guy's P.M. room by Perry and Shaw. Macroscopically the same three types of growth occur as elsewhere in the alimentary canal, namely, the proliferative or cauliflower type, the ulcerative type with a hard everted edge and indurated surroundings, and thirdly, the scirrhous type with early narrowing and deformity. It is probable that here, as elsewhere, the proliferative cauliflower type is the least malignant as was pointed out by Paul in the case of carcinoma of the colon.

The growth spreads both by direct extension and by way of the lymphatics, and it would appear probable that what we term direct spread is in reality a lymphatic invasion occurring in the lymphatics of the submucosa. In any case it is

usual for a considerable length of the œsophagus to be involved, and the growth rapidly surrounds the tube, leading to stenosis and ulceration, while not infrequently multiple nodules may appear at some distance from the primary growth.

The question of secondary deposits is one of very great importance from the surgical stand-point, as on the ascertained facts two completely opposite views have been taken on that question of paramount surgical importance, as to whether carcinoma of the œsophagus is a growth of high or low malignancy. The facts are very little disputed, and it appears that secondary deposits in distant organs are rare. Deposits in the lymphatic glands also are less common than in other carcinoma, and in various series of post-mortem cases carefully examined from this point of view it is found that from 40 to 60 per cent. of the patients die with the disease still confined to the œsophagus or its immediate neighbourhood.

Of what, then, do these patients die? By far the commonest cause of death is involvement of the respiratory system, which may be direct by the spread of the growth to the lung, or its perforation into the trachea, or bronchi, or indirect by the development of broncho-pneumonia. Less common causes of death are hæmorrhage, either from the growth itself or from its invasion of the aorta, and such indirect causes as exhaustion, starvation and, rarely, the occurrence of metastases in distant organs.

We can conclude, then, that secondary growths in these cases are not common, that local spread is of great importance, that the majority of the patients will die from a purulent broncho-pneumonia however produced.

There is little argument about the facts, but a good deal about their significance from the surgeon's point of view. Our school, which we may term the optimists, argues somewhat as follows: Here is a growth that remains for a long time local, a growth that does not defeat us by wide-spread metastasis, and one which surely we should remove with good success provided we can overcome technical difficulties and make a reasonably early diagnosis. Further, once we have removed it, we need have no great fear of recurrence elsewhere, since that is not the natural history of this particular type of growth.

The other school, which we may term the pessimists, or the rationalists, whichever way our leaning is, accept the same set of facts, but argue in this way. Here, indeed, we are dealing with a highly-malignant growth, one which it is little use even attempting to remove. It is a growth which spreads to surrounding structures so rapidly that it kills the patient even before there has been time for the occurrence of secondary deposits.

It is true they say that these are post-mortem views and that things might be different if diagnosis could be made early, but let us look at the figures and we shall see that even that hope is illusory. The average time, for example, symptoms had been present before the patient died in a series of cases investigated by Soutar was 4 to 7 months, while in a series of cases examined by the same author clinically, symptoms had been present before the patient first presented himself, for an almost similar time. From this the author draws the conclusion that by the time the surgeon first sees the case, in most instances local spread, almost up to the point of causing death, must already have occurred.

Which is the correct deduction of these two we must leave to the future to determine, but I think we can draw one definite conclusion from the accepted facts, and that is, that our present conceptions of the symptoms justifying a diagnosis of cancer of the œsophagus needs drastic revision, and that we must find the early picture of the disease before we can hope for much from surgery. That, however, is a cry that is no new one. We are familiar with it throughout surgery. What hopes had we when the symptoms of general peritonitis were the ones on which we operated for appendicitis—or when cerebral compression was the diagnostic picture of cerebral tumour?

History repeats itself in the case of cancer of the œsophagus, and what we need is a clinical picture of the disease in its earliest stages, before narrowing of its lumen with the coincident spread to neighbouring structures has taken place. Whether we shall ever get such a picture remains to be seen, but the search is at any rate worth while. I would urge you all, when writing reports of these cases, to take the most detailed history you can, and to try to find evidences of ill-health antedating those more urgent symptoms for which the patient has sought relief.

The premonitory signs of cancer of the œsophagus, as we know them at present, are extremely vague and uncertain. The patient often complains of unusual sensations in swallowing and of a lump rising into the throat, even although there is no actual interference with deglutition. There is frequently complaint of a sense of oppression or weight behind the sternum, but no actual pain. These sensations may be present all the time, but are more usually felt only when the patient tries to swallow. In addition there may be present a slight discomfort in the back, or beneath the xiphoid cartilage, shoulders or abdomen, and there may be complaint of cough, hiccough and increased mucous secretion in the throat.

These symptoms are commonly present for a period, but are almost always neglected, partly

because the patient is apt to call them indigestion and to pay little attention to them, and partly because if a doctor is consulted, he quite naturally pays scant attention to what appears a trivial and disconnected train of symptoms.

Somewhat later, for the first time, obstructive symptoms begin to appear. The first of these is usually that the patient, in order to overcome the sense of fullness when he eats, has to take copious fluid and wash the food into his stomach. Dysphagia gradually increases in severity, the difficulty in swallowing dry solid food being followed by obstruction to semi-solid, and finally, even to liquid foods. This dysphagia at first is often intermittent and in occasional cases comes on quite suddenly, so that the patient is under the impression that something has stuck in his throat. Regurgitation of small amounts of food and mucus is a fairly early sign, and streaks of blood may be present in the regurgitated material as well as occult blood in the fæces. Loss of weight and flesh occurs rapidly, pain may be complained of either at the site of obstruction or referred to other parts of the chest or abdomen, and there is a characteristic haunted facial expression. The breath becomes foul, hiccough is frequent, and there may be hoarseness from involvement of one or both recurrent laryngeal nerves. Severe bleeding is rare, but if it occurs, it is often a terminal event due to the involvement of some large vessel, though, as I have mentioned, by far the commonest cause of death is broncho-pneumonia.

The disease from the time of development of symptoms of sufficient gravity to make the patient seek medical advice is a very rapidly progressive one, the duration of symptoms before death in most series of cases studied being from six to seven months, and it is this fact, I think, even more than any question of technical difficulty that fills one with gloom when considering the possibilities of surgical cure of this complaint. From this train of symptoms we see that we can get but little help towards making an early diagnosis, since the majority of complaints are those of obstruction, which must of necessity indicate an advanced condition of the growth, but we can learn one thing, and that is, that if any patient over 40 years of age, and especially a male, who has previously been free from digestive disturbance, complains of the slightest difficulty of deglutition, the possibility of cancer of the œsophagus must be considered and further investigations undertaken.

The next point to be considered are the signs of the disease, and firstly we must see what can be found by a clinical examinaton of the patient before considering special methods of examination. Palpation of the cervical glands may reveal enlargement and careful examination may detect some bulkiness in the œsophagus.

The second swallowing sound which is usually heard on auscultation over the sternum or back in 12 seconds may be greatly delayed or even absent.

The laryngoscope must be used to observe any paralysis of the vocal cords or for evidence of hypopharyngeal growth.

There are three special methods by which we can obtain direct information in regard to the œsophagus, and these are by X-ray examination, the passage of bougies, and œsophagoscopy. In an X-ray examination of the œsophagus, the best method is by means of the flourescent screen. The patient stands obliquely and a barium drink is given, while the passage down the gullet is carefully noted. The X-ray appearances of a carcinomatous stricture of the œsophagus are characteristic. There is moderate dilatation of the œsophagus above the stricture giving a solid shadow which terminates in a cone pointing downwards, and from the apex of this cone a fine twisted stream of barium can be seen threading its tortuous way downwards, and giving rise to the simile of a rat's tail. This, of course, is the appearance of an advanced case. In the early cases it is better to examine the patient while swallowing a considerably thicker pasty meal. In such conditions slight irregularities of the œsophagus may be noted, and a residue may be observed at times on the wall after the passage of the opaque substance, similar in nature to the residue often seen in the crater of a gastric ulcer.

There is considerable dispute as to the wisdom or otherwise of the examination of the œsophagus by means of the passage of sounds or bougies.

The dangers attendant on this method have been stressed especially by certain laryngologists, but with the exercise of reasonable care and gentleness, little harm is likely to result and much can be learnt by such a method. Plummer, of the Mayo clinic, advocates giving the patient a silk thread to swallow. When sufficient has been swallowed he states that the end will pass through the stricture and ultimately, when it has passed on into the intestines, it can be drawn upon and will act as a guide to the entrance to the stricture, which is then examined by olive-headed bougies threaded over the silk. While this method certainly acts well in cases of achalasia of the cardia, I personally have had difficulty in getting the thread to traverse a malignant stricture. Gum elastic sounds may be used, or Symonds' whalebone sound with an olive-headed tip may be passed. With this instrument cautiously used the length of the stricture may be measured, as when it has passed through the stricture and is withdrawn, there is a definite resistance as the acorn engages in the lower end of the stricture. The passage of a soft rubber

œsophageal tube also will usually prove the presence of a stricture and is relatively free from risk. It must be emphasised, of course, that no real force must be used; if an instrument cannot be engaged in the stricture without force, its use must be abandoned. Œsophagoscopy is, however, the more scientific method of examination, and the one which gives the most valuable information. It is, however, a proceeding requiring great gentleness and considerable knack, and one which, in careless hands, is fraught with very great danger. The œsophagus is, in any case, very fragile and in elderly men with possibly ulcerated growth present a disaster is easily brought about. Local or general anæsthesia may be used, but I prefer the former as being considerably safer.

The appearances in a marked case are characteristic. The œsophagus is seen to be filled by a white frothy mucus which blocks the view and must be removed by swabs or by a sucker, and as the instrument approaches the growth it will be seen that there is infiltration of the wall as evidenced by absence of the usual respiratory movement. When the top of the stricture is approached it may appear as a mere constriction with the mucosa red, smooth and immobile, or there may be a fungating mass of growth which bleeds readily, or again we may see a deep ulcer in the œsophageal wall, depending on the type of growth present.

The differential diagnosis of cancer of the œsophagus, once there is evidence of any interference with its lumen, is not, as a rule, difficult, especially when it is remembered that one half of all œsophageal lesions are due to cancer, and that 90 per cent. of patients over 40 without a previous history of trauma, who have had dysphagia for less than a year, are suffering from carcinoma of the œsophagus.

Tumours pressing on the œsophagus from without such as aneurysms, thyroid tumours, mediastinal tumours and affections of the spine, can generally be excluded by a routine examination, though aneurysm must always be kept in mind as a cause of œsophageal obstruction as in several instances aneurysms have been opened by the incautious use of bougies or the œsophagoscope. As regards lesions of the œsophagus itself, the most important are traumatic stricture, such as is produced by the swallowing of caustics, achalasia of the cardia or as it was formerly called cardiospasm, œsophageal pouch or Zencher's diverticulum.

Traumatic stricture usually occurs in young individuals. There is a history of the swallowing of hot or corrosive fluid, and the symptoms of dysphagia have usually been present for a long time.

Achalasia again is usually met with in younger patients. There is a long history of dysphagia, and other X-ray appearances of marked and regular dilatation of the œsophagus are characteristic.

Zencher's diverticulum at the upper end of the œsophagus may sometimes give rise to difficulty. Careful examination under X-rays, however, will show that bismuth leaves the dilated portion at the upper end instead of at the lower as in cancerous stricture. Plummer's method of diagnosis by means of a swallowed silk and a bougie threaded over it will make the nature of the condition plain.

Treatment of cancer of the œsophagus presents a gloomy picture, and in the great majority of cases only palliative treatment can be considered. Such palliative treatment is of three kinds, namely, gastrostomy, dilatation of the stricture with or without intubation, and radiation treatment by X-rays or radium.

Gastrostomy, which consists of making an opening into the stomach by one of several different methods, and tying a catheter into the opening, permits of liquid food being given directly into the stomach, and avoids in successful cases the distressing symptoms of starvation from which these patients suffer so greatly. Further, if gastrostomy is done before the terminal stages of the disease are reached, and especially if it is followed by a course of potassium iodide, it is not infrequently found that the subsidence of inflammatory changes in the growth by its freedom from food irritation together with the absorption promoted by the iodide may permit the resumption of swallowing in the normal manner for a time. On the other hand, although in itself a minor operation, gastrostomy in these patients is attended with a considerable mortality. It is very distasteful to the patient, and as the majority of these cases occur in poor patients the after treatment of a gastrostomy gives rise to considerable trouble and distress, while in addition the presence of a gastrostomy serves constantly to remind the patient of the presence of his disease. For this reason I consider dilatation and intubation of the stricture, whenever possible, a more satisfactory palliative treatment.

It has a somewhat higher mortality it is true, but when we consider the nature of the disease, and the expectation of life which, when sufficient obstruction to justify intubation is present, is only a matter of a few months in any case, this has little importance beside the greater comfort achieved in successful cases.

Vinson of the Mayo clinic advocates forcible dilatation of the stricture by bougies threaded over a swallowed thread and repeated if necessary, but without intubation.

Sir Charters Symonds introduced the use of funnel shaped gum elastic tubes, passed through the stricture by means of an instrument inserted into the upper end and kept in place by a piece of silk fastened to the upper end and brought out of the mouth.

Soutar has devised tubes made of coiled German silver wire, which are inserted into the stricture under direct vision through the œsophagoscope, after the stricture has been dilated to the necessary size by means of aluminium dilators, also passed through the œsophagoscope. Any method of intubation, of course, does considerably increase the risks of rupture of the growth into the surrounding structures, but in a successful case the patient is enabled to swallow by mouth for the remainder of his short life, and is freed from the constant reminder of his disease which a gastrostomy entails.

X-ray treatment has proved of little or no use in this disease, and the results with radium so far have been little better, though Guisez and others have reported isolated cures, but much remains to be learnt about suitable methods of applying radium in these cases.

Turning to attempts at actual removal of the disease by surgical removal, we find the matter is still in the experimental stage. The most hopeful sites from this point of view have so far been the upper and lower ends of the œsophagus.

In the upper end the principles of the operation have been the removal of the affected segment of œsophagus, followed by a restoration of its continuity by means of a flap of skin turned in and formed into a tube with the skin surface towards the lumen, and a few isolated successful cases have been reported. The operations performed on cancer of the lower end of the œsophagus have been either carried out from the abdomen, with anastomosis of the stomach and œsophagus, or have been performed after excision of the lower ribs with division and transplantation upwards of the diaphragm. In this region, also, there have been several successful cases recorded.

The thoracic portion of the œsophagus has, however, so far defied surgery, except in two cases, that of Torek whose patient has survived more than 12 years and that of Eggers.

In both these cases the operation performed was a posterior mediastinotomy with division of the œsophagus below the growth and invagination of the lower end. An incision was then made in the neck, and the upper part of the œsophagus containing the growth was drawn through this incision. The tumour was removed and the rest of the œsophagus was passed under the skin to emerge through an incision in the second intercostal space. Torek's patient swallowed well through a rubber tube, one end of which was pushed into the œsophagus where it opened at the second intercostal space, and the other into a gastrostomy opening.

Many other methods of dealing with thoracic œsophageal growths have been tried, but so far, without success. The most promising is probably that which is attempted in two stages. In the first, either with or without a pneumo-thorax, the region of the growth is reached extrapleurally by an intercostal incision, or by a posterior mediastinotomy, and a flap of skin is turned in and folded round the growth. At a later operation the growth is removed and continuity restored by utilising the skin tube. So far, however, no successful case has been reported by this method.

We see then that cancer of the œsophagus is a common disease, of insidious origin, and one which leads to death within 6 to 8 months of the patient presenting himself to us for treatment. Our treatment so far can be palliative only and even as such leaves much to be desired. The only profitable lesson I think we can so far draw is the importance of never treating lightly any symptoms of deglutitional difficulty in a patient over 40, with no previous history of dyspepsia.

Dare Quam Accipere

HAVE you ever tried to swallow a duodenal tube?
If you listen very carefully I'll tell how easy it may prove;
Take a deep breath and swallow, the beastly thing slips down,
Of course you'll loathe it heartily and fix it with a frown.

At last! no more to swallow,
But oh! what is to follow?
A sinister-looking trolley is standing by my bed,
And oh! how its equipments are filling me with dread;

Beside it stands the doctor looking serene and kind,
But upon my "innards" contents, I'm sure he's set his mind.

The rogue he's pinched my "resting juice" and I'm squirming all inside,
But what I'm wondering so much is what he'll pinch beside?

With cunning art he seeks to train my thoughts to other spheres,
It seems to me he's surmised all my wretched fears.
A look of triumph lights his face, it breaks into a smile,
As joyously I hear him say "why good, 'tis bile!"

But my "innards" thus assaulted could no further insult bear,
The accident which followed, you perhaps,—well, have a care.

A. C.

Current Cases—IV and V.

Two Accident Cases

THE following are two cases, both the results of accidents. There is no similarity between them ; the injuries in the first were to the abdomen and in the second to the head, but each it is thought, may be of some interest.

The first patient, E.B., a man of 20 years, of muscular build, met with an accident at 5.30 a.m., on 15th April, 1930 ; he was running in front of a loaded hand-barrow in Borough High Street, when he had to pull up behind a van in a traffic block, a car ran into the back of the barrow and pushed it forward so that his upper abdomen was nipped between the barrow and the tail board of the van in front. This resulted in a " knock-out," due to a blow in the solar plexus. He recovered in a few minutes and was taken to the surgery ; when seen he was not greatly shocked, and it was thought that very probably no serious injury had been sustained, warm blankets were applied and it was decided to watch him.

Four hours later, he had not improved in general condition, though his pulse remained steady at 100 to 110 per min. ; but he had vomited twice, the vomit containing no blood ; the take-in House Surgeon was asked to see the man, and admitted him to Luke under Mr. Steward. The patient was moderately shocked and seemed dazed, while he complained of increasing pain in the right hypochondrium. Examination of the abdomen showed very superficial marks of bruising immediately to the right of the umbilicus, and to palpation there was tenderness and definite guarding in the right half of the abdomen, more marked in its upper part. Liver dulness was present ; a catheter specimen of urine was normal.

Three hours later the patient seemed more ill, but his pulse still remained steady. An X-ray of the abdomen taken at this time showed no subphrenic bubble. The pain was very severe and his abdominal signs were more marked. At 4 p.m., he was seen by Mr. Steward; his condition was then very much the same ; further vomiting had been limited to an occasional mouthful of bile-stained fluid. Mr. Steward then thought that it was unlikely that any viscus had been ruptured, and that in all probability the injuries consisted of extensive bruising ; he pointed out that in the event of ruptured intestine, the patient's condition should be much worse at the end of ten hours.

At 6 p.m., Mr. Steward again examined the man, who seemed definitely more ill, and whose pulse had risen to 120 per min. The whole, but especially the upper abdomen was quite rigid, and there was no movement on respiration, liver dulness was normal, the tongue was dry and slightly furred. Various conditions were discussed, such as retro-peritoneal rupture of the duodenum, and Mr. Steward decided in favour of an exploratory laparotomy. On opening the abdomen no free gas or fluid was found, there being no gross injury to any viscus. The ascending and transverse colon, however, showed most extensive bruising with sub-peritoneal hæmorrhage over the greater part of their length ; there was also hæmorrhage into the transverse mesocolon.

Following the operation the patient's condition rapidly became much worse, and in spite of rectal saline, one pint 6-hourly, by the following evening the pulse was in the region of 160 per min. The respiration rate had risen to 30 or 35 per min., and examination of his right chest showed a large area of impaired resonance with distant bronchial breathing at the right base, signs, it was thought, of a traumatic pneumonia. However, by midnight he was improving and subsequently he made a good recovery only marred by ileus.

The above case was interesting in many ways for those who saw the man, but particularly, in the first place on account of the severity of the symptoms and signs from purely retro-peritoneal bleeding and bruising; at the time of operation the rigidity of the abdomen was that of a perforated peptic ulcer; and in the second place it was most instructive to note the severity of the reaction after the laparotomy, quite out of proportion to the extent of the operation, for the intestines were hardly handled at all and were never outside the abdomen.

The second patient, A.W., an errand boy of 17 years, at 1.30 p.m. on 20th January, 1930, was knocked down by a bus, hitting the right side of his head on the kerbstone. He was picked up and brought to the surgery. He was quite conscious remembered the exact details of the accident, and apparently had not been rendered unconscious at all. No physical signs were found, but half-an-hour later he seemed a little more dazed; when admitted at 2.30 p.m. his pulse was 76 per min. he was not shocked, and could answer questions quite rationally, but there was slight left facial weakness, and a doubtful nystagmus to the right ; the pupils were small, equal, and reacted to light. In addition the left plantar reflex was extensor, and the left knee-jerk absent, the right plantar was

indeterminate. On arrival in Astley-Cooper, the patient was unable to give his name ; half-an-hour later he was again fully conscious and sensible, but again lapsed into semi-consciousness an hour later.

At 6.30 p.m., he was more drowsy, but his physical signs remained unaltered. His systolic blood-pressure was 145 mm. Hg. At 7 p.m., however, with dramatic suddenness his condition changed ; he lapsed into complete unconsciousness, and developed convulsive movements of the left side of the body. The left arm and leg, also the right arm were found to be spastic, the tendon jerks were correspondingly increased, and both plantar reflexes were extensor. Further, the right pupil became dilated and fixed ; breathing was stertorous. The pulse rate still remained steady. The systolic blood-pressure measured 170 mm. Hg.

It was presumed, in view of the localisation of the site of compression, and a history, though atypical, of a definite lucid interval, that the probable injury was a middle meningeal hæmorrhage. Mr. Northfield therefore decompressed the brain, removing a large area of the right temporal bone. On reflecting the scalp a fissure was found running, it appeared, right across the cranium, but on removing bone no extra-dural bleeding was found ; the dura matter, however, was blue and bulged through the opening ; it was incised and a large mass of blood clot turned out. The underlying brain was everywhere blue-black in colour, due to extensive bruising with subarachnoid hæmorrhage. The blood was chiefly coming from the vertex, and although the decompression was extended upwards it was impossible to arrest the profuse bleeding which probably case from the superior longitudinal sinus ; accordingly a rubber tube was left in place and the incision closed.

As was expected, the boy rapidly got worse, again developed signs of compression and lay in complete coma. Twenty-four hours after operation his temperature was 102.5°, his pulse rate 175, and his respirations 50 per min., while in spite of atropine, muco-pus just steadily dribbled from his mouth, so advanced was his bronchitis. No hope of his recovery was entertained, but the following day he improved, and the day after, when being fed by spoon, to Sister's astonishment, opened his eyes and took the cup from her. From that date he never looked back ; the next day he was able to talk, but not to be understood, though he appeared sensible. His hemiplegia remained unchanged for a further twenty-four hours and then slowly improved. A month later the left arm and leg had fully recovered, but there was still weakness of the left face and left side of tongue, a further fortnight was sufficient for these also to recover.

On discharge he was walking well, had no headache and showed no mental abnormality. No further complication had arisen when last seen a month ago.

This case was of great interest both from the nature of the injury and from the fact of his complete recovery, although at one time his condition certainly appeared hopeless. What the ultimate prognosis is, it is difficult to say.

I would thank Mr. Steward and Mr. Northfield for permission to publish these two cases.

J. B. B.

Saliva

A Paper read before the Guy's Hospital Dental Society by R. W. F. Brotherton

MR. PRESIDENT AND GENTLEMEN,—It is a general pathological law, and not confined to the human tissues, but pervading the whole of nature, that stagnation in any cavity tends towards disease, and conversely, all those forces which promote movement and circulation make for health and development. Protection against disease is afforded to nearly all the tissues by the fluids with which they are in contact. Pickerill states " a fluid in which the teeth are permanently bathed cannot be without effect upon them, and the only fluid capable of directly protecting them is the saliva."[1]

Dr. Sim Wallace observes, " that oral hygiene is a physiological process and that all the glands opening into the mouth with their secretions, are especially adapted for the maintenance of oral hygiene, and that all these secretions are scarcely, if at all, of importance for any other function." This author[2] advances the following suggestions which tend to show that saliva is not primarily a digestive juice and that its function is for the preservation of the teeth.

Firstly, the saliva of many animals contains no ptyalin, yet they digest starches very completely.

Secondly, why does sugar excite a flow of saliva rich in ptyalin ?

Thirdly, why does pytalin exist in the saliva at birth ? Oral hygiene is necessary with a milk diet, but are we to believe that ptyalin is there to digest starch which normally is not present ?

Fourthly, why is starch, as soon as it is mixed with saliva, transferred to the stomach, where conditions are often present which stop further action ?

The suggestion that the function of mucus is the lubrication of a bolus of food is untenable, because

the process of mastication is the disintegration of anything in the nature of a bolus, and its reduction to a semi-liquid state in which the saliva, the mucus and the food are all churned up together.

The ptyalin content of saliva is present to digest the starch debris in the mouth, to render the insoluble, adhesive starch, into an easily soluble and removable substance such as maltose. This reaction continues whether the saliva be faintly acid or alkaline to litmus. Now maltose is probably more easily fermented by mouth organisms than starch, therefore it is essential to have an adequate supply of ptyalin, so that the pabulum will be quickly removed.

Moreover, the intermediate process in the conversion of starch is the production of dextrin, which is of a very sticky nature, which, in ptyalin insufficiency, will remain in contact with the teeth for a greater period, and the organisms in the mass may form free lactic acid which will destroy the diastatic action of the ptyalin. And yet Michel,[3] referring to this constituent, observes "caries can only develop in a mouth whose saliva has amylolytic powers. In those animals whose salivary ferments have little or none of this power, immunity to caries is always found, and the frequency of caries in man stands in direct ratio to the amylolytic power of saliva." Dr. Lovatt Evans failed to show any relation between the ptyalin content of saliva and caries.

Concerning the mucus content of saliva, Dr. Wallace[4] observes " Just as the function of mucus in the bronchioles is to keep these tubes clean, so is the essential function of oral mucus to keep the mouth clean." Food debris is removed by virtue of the ropy nature of mucus, which also possesses the power of being disintegrated and carrying itself away if the dietetic conditions are favourable. The mucinous plaque which is exposed to an alkaline medium needs friction for its removal, this being effected by efficient mastication. The plaque subjected to an acid, however, becomes disintegrated because of the precipitation of the mucin, and is readily washed away. The chemical action of the food plays little part in this function, since if the resting saliva be acid, it becomes alkaline during mastication, and, on the other hand, if the food is more acid than can be neutralised by the alkaline flow of saliva, then the mucus films are disintegrated.

No matter whether the food passes from the mouth to the œsophagus, or whether it passes from the stomach to the mouth, saliva is secreted in quality and quantity proportionate to the needs of the food and to expel food from the mouth.

During teething, there is a distinct rise in salivation which continues day and night. This may be due to the teething, the rapid development of the salivary glands at this period, or to the fact that the infant may not yet have acquired the faculty of swallowing its saliva. But from the clinical observation, that in teething there is great salivation and that the maintenance of oral hygiene influences the amount of pain, pyrexia and other coincident disorders, it would seem that the cleansing of the mouth is the primary physiological function of saliva.

Just as is the case of other body fluids there is some slight initial bactericidal action if the saliva is in excess over the organisms, but if the organisms are allowed to remain within the fluid there is an increase in growth. But Sim Wallace states " although laboratory experiments show saliva to be an excellent medium for the cultivation of bacteria, the saliva in motion in the mouth is quite different." Another protective property may lie in the fact that the normal flora present in the saliva may monopolise pabulum and hinder the development of more dangerous species.

A considerable divergence of opinion exists as to the importance of the sulphocyanate content of saliva. The sulphocyanate is claimed by some investigators to exert a continuous disinfectant action upon the bacteria of the mouth, but Mr. Bulleid does not share this view. Michel asserts that it has an effect upon the microörganisms in the mouth and so lessens caries, as in 840 patients examined he found that the sulphocyanate content and caries were in inverse proportion. Pickerill, who in his investigations sought to explain immunity to caries to the saliva, suggests that the sulphocyanate does exert a slight antiseptic action although it is not sufficient, even in a 1 per cent. solution, to act as a disinfectant ; and that it also retards the process of fermentation, lessening the amount of acid production in the strength in which it is found in the saliva ; and lastly, that there is a possibility that the constant presence of sulphocyanate may have a beneficial effect, if only present in sufficient quantity. It is probable[5] that the sulphocyanates are wholly excretory in character, cyanides being converted into harmless sulphocyanates, as in pellagra there is a lessened protein intake with a correspondingly lessened sulphocyanate content of saliva.

According to Miller, the sulphocyanate content of saliva does not possess any appreciable antiseptic property, and although the saliva of those immune from caries is a little less acid in the presence of carbohydrates, this difference is not marked enough to warrant any definite conclusion. MacNevin and Vaughan state that observations upon the relation of sulphocyanate and caries are of historical interest only.

But although saliva may not be antiseptic, it does not follow that it does not retard caries, the alkaline salts to some extent limiting the carious process. Dr. Joseph Head made the important observation that when enamel had been softened by acid, then re-immersion in saliva produced a hardening.

Mr. Malleson's researches have shown that enamel is not a fully calcified and inert block of tissue. Enamel undergoes a process of hardening by the absorption of calcium after eruption and although the calcium content does not materially increase with age, it is possible that the process will not be so much an alteration in amount of calcium so much as an alteration in its combination.[16] The degree of enamel condensation will be in direct proportion to the calcium content of the blood and saliva. Rickert found that in some cases a small amount of calcium phosphate from enamel went into solution in distilled water, but none would dissolve out in saliva. In all cases in which no solution into water took place the teeth were carious, suggesting that solution had already taken place. Thus it would appear that saliva had a restorative function depending upon the physiological permeability of enamel, as well as one of prophylaxsis.

The salivary corpuscles, amœboid phagocytes, are, according to Sim Wallace, the only satisfactory way of controlling bacteria in the gingival trough, and possess the sole function of oral hygiene. Professor G. V. Black, referring to that little portion of connective tissue in immediate conjunction with the tooth which is uncovered by epithelium, observes that it seems to be through this space that the salivary corpuscles found under the free border of the gingiva pass. They may be found at any time under the healthy gingiva and are augmented by every irritation of the periodontal membrane.

The normal secretion of saliva is a reflex one in response to stimuli applied to various parts of the mouth. The afferent nerves of secretion are the lingual and glossopharyngeal, with their specialised terminations in the end organs of taste, and to a lessened extent, the sensory branches of fifth nerve supplying the buccal mucosa and the teeth. The efferent side of the arc is formed by the chorda tympani and auriculo-temporal nerves. The real connection between the gustatory nerves and the salivary glands becomes apparent when it is realised that the lingual and buccal sensory nerves have no connection with the stimulation of gastric juices. It becomes clear that the function of taste and the fine appreciation of flavours is to excite a flow of saliva which is suited to the substance in the mouth, preparing it for deglutition, or enabling it to be expectorated if disagreeable.

Soft and least flavoured foods produce the smallest secretion, sweet substances produce a greater secretion, whilst the greatest stimulant is an acid article of diet. Although the majority of foods tend to increase salivary flow, it is interesting to note that bread and butter decreases the secretion. This may be due to the demulcent action of the butter, the tongue being coated with a neutral oily fluid thus preventing the mucous membrane from being stimulated. The alkalinity also shows a variation with the volume and type of food taken, sweet substances markedly depress alkalinity whilst acid substances increase alkalinity. Although lemon is very acid, and should therefore produce a flow of alkaline saliva, it is found that the reaction is smaller than to a less acid article. Pickerill, to explain this, suggests that the afferent nerve endings become temporarily paralysed by the very strong stimulus given them, and when the acid is diluted and neutralised by the saliva, the full effect of the stimulus is felt, resulting in an index $3\frac{1}{2}$ times above the normal. But it must be remembered that the changes produced in the rate of flow and *p*H index by the local action of articles of diet are momentary, and the reaction soon becomes normal for the individual. Broderick says that these changes will be secondary to those produced by metabolic processes.

The ptyalin content of saliva increases in response to an acid stimulus more than any other constituent and not as would be expected, in response to starchy foods which unfortunately form a great part of our diet. There are many articles which are salivary depressants, such as meat, bread and butter and tea. If there is a habitual consumption of these substances then there may occur pathological conditions in the mouth. Furthermore, Prinz states[7] "the most pronounced indirect salivary stimulant is produced by the act of mastication, chewing of the food markedly augmenting salivary flow by the increase in the number of stimuli applied to the mouth, and by ensuring close contact of food with the taste buds. This author quotes a case in which xerostomia developed in an edentulous patient which was cured by the insertion of dentures. Apparently this inhibition of secretion arose through inability to masticate.

Mr. Guy Clarke[8] fed five physically sound men of different ages and temperaments on two consecutive diets. The first one in which acid end products were formed, was given for several weeks, followed by one of which the end products were alkaline, and, at the end of a period of 28 weeks following analyses of saliva, blood, urine and

fæces, the following conclusions were drawn. Firstly, although the constituents of saliva must primarily be supplied by the circulatory blood and lymph, it was not possible to show any relationship between the concentration of elements in the blood and those appearing in the saliva. Secondly, it was not possible to show the existence of a relationship between the amounts of a given element ingested or retained and the amount appearing in the resting saliva. The failure to demonstrate this relation that one imagines should exist may be due to :—

1. The complex nervous mechanism of secretion.
2. The existence of a highly selective excretory power of the salivary alveoli.

It is also found that in diabetics sugar passes with difficulty into the saliva and is not found in any appreciable quantity except in pronounced diabetes. Prinz states[9] that in no case, even in saliva from a diabetic whose sugar content in the urine was 7 per cent. could the faintest trace be found. This, however, may be due to the sugar disappearing by fermentation.

I have indicated the difficulties that confront an effort to demonstrate the connection between ingested elements, the blood and the saliva, and yet there are some conditions that tend to illustrate the relation. For example, H. E. Starr[10] found that there existed a relationship between the carbon dioxide content of the alveolar air of the lung and the reaction of the saliva, the greater the carbon dioxide content then the more acid the saliva. Furthermore, in deep breathing before an open window there was a tendency to an alkalosis with changes in the saliva due to the rapid loss of carbon dioxide ; the converse of this condition was shown in an acidosis and consequent lowering of the *p*H index which supervenes upon daily labour.

Moreover, the saliva is found to vary with age. During[11] the early years of life the essential elements and the metabolic functions of the body are directed towards the growth of the individual; there is therefore an abundance of calcium salts to fulfil this function. These salts, as would be expected, are found in quantity in the saliva which is therefore alkaline.

Between the ages of thirty to forty years when there is a more balanced endocrine system and when the mental strain is less than in early youth the extremes of the saliva are lessened. During the next period of life, however, from forty to fifty years, there are again changes and instability in endocrine equilibrium, especially so in women at the menopause, and there is a tendency for a considerable alkalinity in the saliva. In extreme old age the saliva passes well over to the acid side.

Michaels states[12] " salivary composition is a reflex of metabolism at a given time and is therefore an index of bodily state of even greater importance than the composition of the blood or urine," and Howes states "saliva is individual in character, it reflects the physiological actions of the system."

The injurious influences of pregnancy and lactation upon the teeth are well known, and among the causes may be, firstly, metabolic influences and, secondly, changes in the saliva.[13] During pregnancy the mother is known to have a high acid and a lowered ptyalin index. The treatment to reduce dental disease during pregnancy must be to lower the free acidity of the saliva and to increase the calcium, magnesium and ptyalin indices by dietary recommendations. In this manner oral sepsis may be reduced during pregnancy. The diet should be regulated mainly from the point of view of the mother[14] and not from the more theoretical view of the effect upon the fœtus. It is usual, however, that what is good for the mother is good for the fœtus. The saliva of the mother is analysed and the treatment based upon the findings.[15] This treatment may be summarised by—

1. Increase of mastication power to a maximum.
2. Recommendations as to diet.

In advising a diet large amounts of fats and calcium must be avoided, as the former leads to a rapid increase in weight which predisposes during pregnancy to a toxæmia, and too much calcium might lead to an over calcification and consequent hardness of the cranial bones causing a complicated labour.

CONCLUSIONS.

1. That saliva is secreted mainly for the preservation of oral hygiene.
2. That its constituents acting together may be adapted for this function.
3. That it has a beneficial action upon the teeth.
4. That its nervous control is delicate, responding differently to various articles of diet.
5. That it changes with metabolic activities.
6. That the above observations are of importance in the treatment of oral conditions during pregnancy.

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Salomons Centre Post-Natal Clinic

Report of the Work by Guy Neely, Esq. M.R.C.S., L.R.C.P.

IN presenting a report of part of the work done at the Salomons Centre during the past five years no detailed description is attempted. The life history of some of the cases from three weeks to five years would not only be tedious, but in most instances unprofitable. The case sheets alone would make an omnibus book, whilst any amplification of the notes would fill a library shelf. The most that has been attempted is some general classification.

Analysis shows that out of 283 cases, 209 were entirely breast fed, 58 mixed or complementary fed, 16 artificially fed. One or two interesting facts emerge also, namely, that the number of infants with some degree of umbilical hernia when first seen totals as much as 25 per cent. Only one case of inguinal hernia was noted and one case of pyloric stenosis and no case of congenital syphilis. Thus the usefulness of the Centre from the point of view of detection of actual or incipient disease is questionable. No doubt there is much material which would repay careful investigation, if only to correct or substantiate what are now generally accepted facts, such as the rate of growth of the cranium, the average date of closure of the fontanelle; or again, the detailed history of the infant carefully recorded, with certain salient characteristics emphasised—for example, refusal of food, early appearance of enlarged glands, rapid destruction by caries of temporary teeth might serve in the distant future as a clue to abnormal behaviour, or give the starting point of a disease developing apparently in later life. For the purposes of this paper, material has been selected which illustrates, somewhat imperfectly it is true, certain variations of or accessories to, breast feeding. Artificial feeding is not touched on. It is an expedient seldom resorted to, and the fairly large number of entirely artificially fed babies attending the clinic is explained by the fact that they were already on the bottle at the time of their first attendance.

Cases for illustration have been selected from groups falling into the following categories :—

(*a*) Variable results of breast feeding within normal limits.

(*b*) Breast feeding at unusual intervals.

(*c*) Breast feeding by relatively elderly mothers.

(*d*) Alternate breast feeding substituted for "both breast" feeding.

(*e*) Complementary.

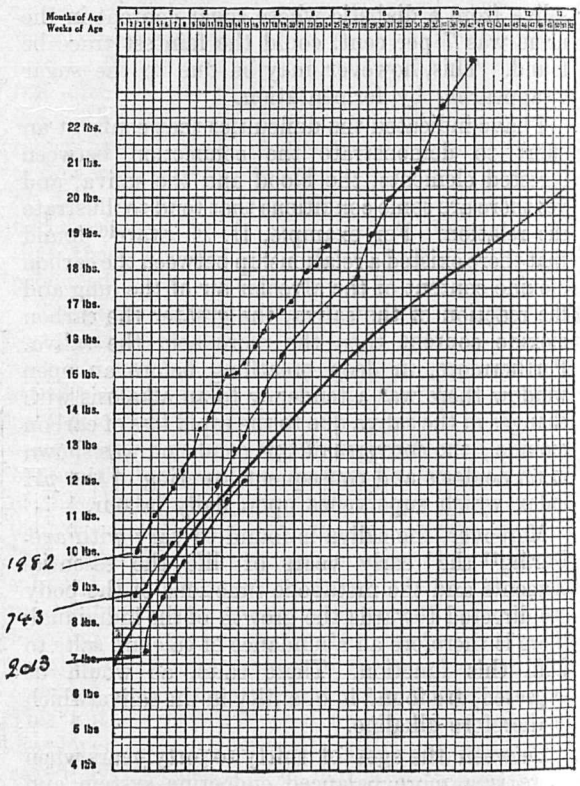
(*f*) Mixed.

(*g*) A case of pyloric stenosis.

(*a*) *Variable results of breast feeding within normal limits—*

The three cases are selected almost haphazard showing either a rapid or sustained increase in weight.

2013. The fourth child. Mother aged 26. Wage £2 10s. per week. Shows a not infrequent rise of 1 lb. in one week, in this instance from 7 lb. 4 oz. to 8 lb. 4 oz.



1743. Illustrated the not very unusual occurrence of the graph running off the map in the first year of life.

1982. The third child. Mother aged 23. Calls for no comment.

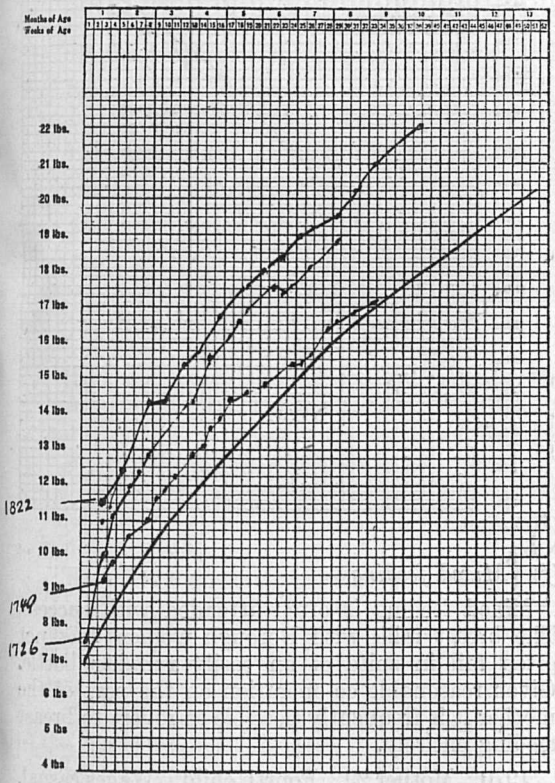
(*b*) *Breast feeding at unusual intervals—*

Older writers almost invariably advised breast feeding at two-hourly intervals. In recent years a

rigid adherence to a four-hourly interval has been advocated. With some nurses this has become an article of faith. The three charts below show, that in certain cases a wide variation may be allowed.

1726. Second child. Mother 25. Wage £2 10s. per week. Rent 11s. 1d. Four-hourly feeding until 17 weeks of age, at which time no feed was given between 5 a.m. and 11 a.m., subsequently the early morning feed was omitted and feeds given at 10, 2, 6 and 10.

1749. Third child. Mother 31. Wage £2 15s. Breast fed four-hourly until 11 weeks of age, when the babe was put to the breast at 7, 2 and 6. Later an extra feed was given at the times altered to 8, 12, 4 and 8.



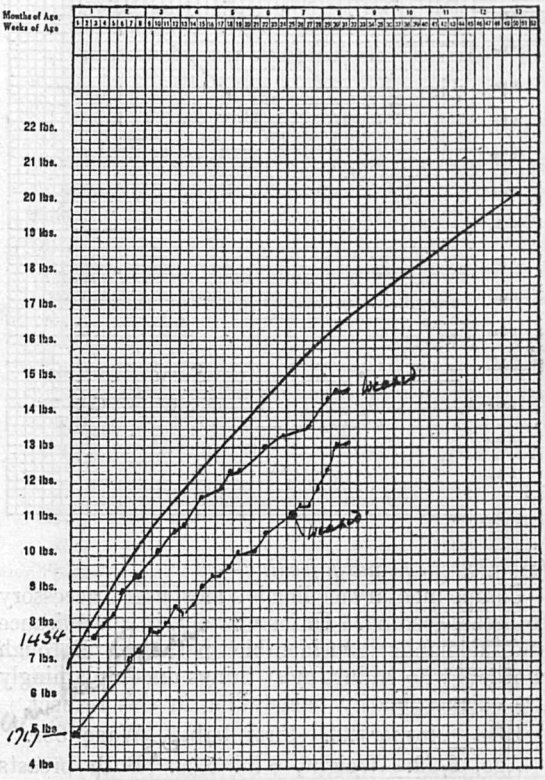
1822. Fourth child. Mother aged 29. Four-hourly feeding until ten weeks old. Then fed at 7 a.m., 1 and 7 p.m. Later, 6 a.m., 12, 4 and 10 p.m.

It would appear that not only will some infants thrive when fed at long intervals, but that drastic changes may be made in the time table without any resentment on the part of the infant.

(c) *Breast feeding by relatively elderly mothers—*

It has been stated that elderly women are not good nursing mothers. Although this is often true the reason is often pschycological rather than physiological.

1434. Mother 40. Tenth child. Wage £2 9s. Succeeded in accompanying her infant for seven months on its life's journey.

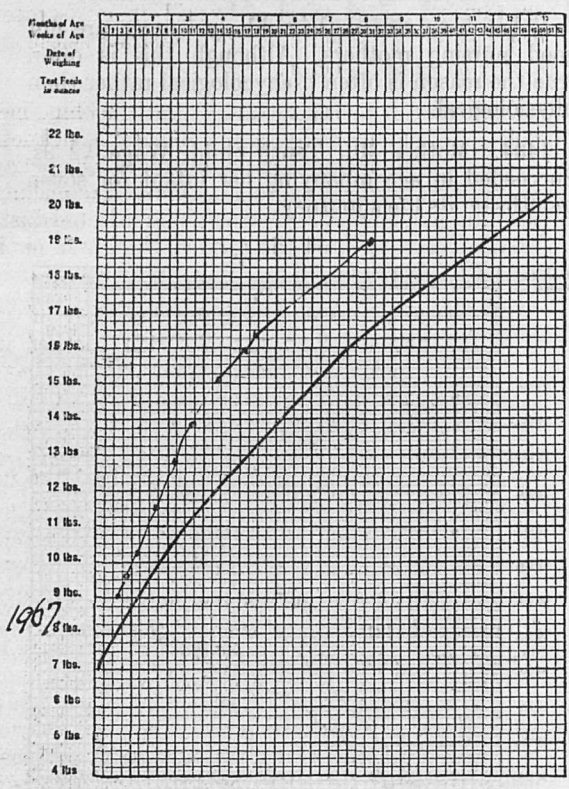


1717. Mother 43. First baby. Breast fed until 12½ weeks, then complement of milk 1oz. after each feed.

(d) *Alternate breast feeding substituted for "both-breast" feeding—*

Mother 21. First baby.

Overfeeding at the breast is sometimes difficult to combat. It is not easy to convince a mother that a fretful baby is not suffering from starvation. Interspersed in the notes on this case are cryptic comments, "screams," "bad sleeper," possets +. A change from feeding on both breasts at each feed to alternate breast feeding at the age of 14 weeks brought peace into an unhappy household.



(e) Complementary feeding—

Complementary feeding is a most useful accessory to breast feeding. Unfortunately, it is a nuisance and demands considerable patience. Borough mothers who endure most things uncomplainingly are extraordinarily painstaking in this respect.

1843 Mother 23. First baby. Wage 35s.

Age, 6/52. Weight, 8 lb. 5 oz. Both breasts 4-hourly.

12/52. 9 lb. ½ oz. Both breasts 4-hourly. Complement, milk ½ oz., water ½ oz.

14/52. 9 lb. 4¼ oz. Both breasts 4-hourly. Complement, milk 2 oz., water 1 oz. after each feed.

20/52. 13 lb. 2 oz. Both breasts 4-hourly. Complement, milk 1 oz., water 1 oz. after 2 o'clock feed only.

27/52. 15 lb. Breast only.

1695. Mother 28. First baby. Wage £2.

Age, 10/52. Weight, 7 lb. 10 oz. Both breasts 4-hourly. Complement, milk 1 oz., water ½ oz., malt ½ oz. after each feed.

12/52. 8 lb. 6 oz. Both breasts 4-hourly. Complement after 2, 6, 10.

14/52. 9 lb. Both breasts 4-hourly. Complement often refused.

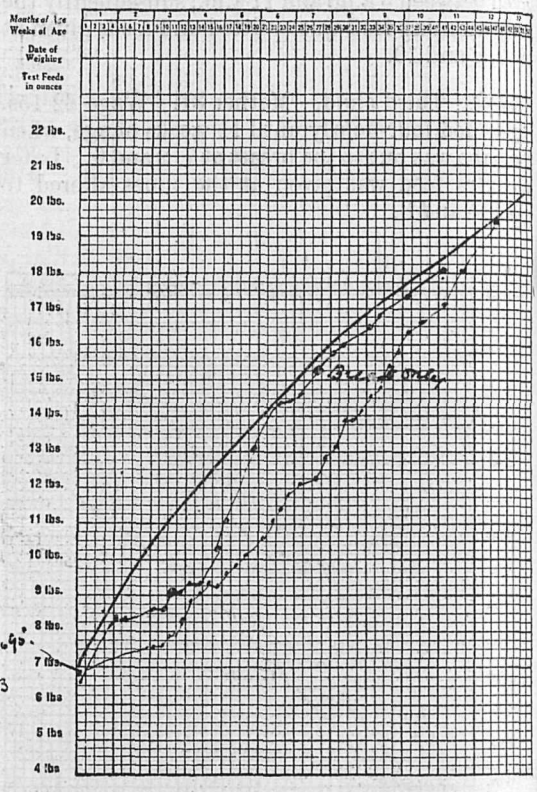
15/52. 9 lb. 6½ oz. Both breasts 4-hourly. Complement, after 3 feeds.

17/52. 9 lb. 9 oz. Breast only.

27/52. 12 lb. 3½ oz. To resume complement.

28/52. 12 lb. 14 oz.

31/52. 13 lb. 15 oz. Mother ill. To wean.



(f) Mixed feeding—

Mixed feeding is often attended with success. The breast milk with Borough women does not often fail in spite of an easily running bottle. Given reasonable co-operation on the part of the mother it is frequently possible to revert to breast feeding entirely.

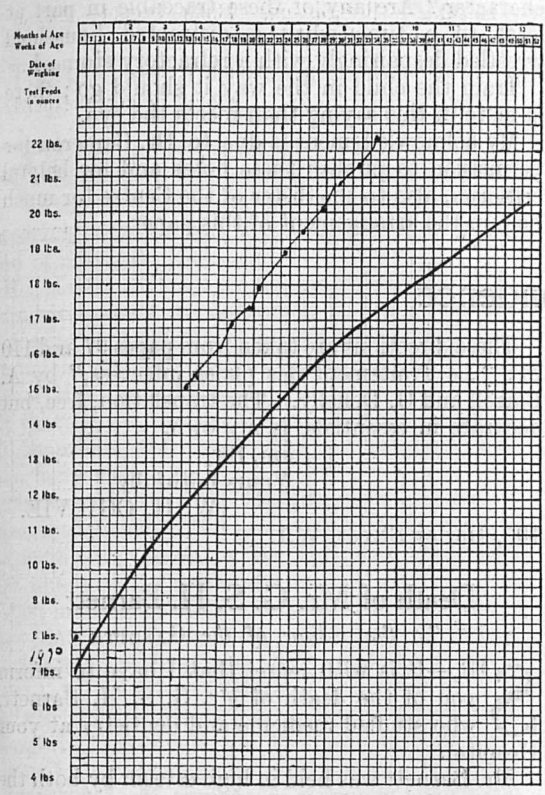
1970. Mother 29. Fourth child. Wages casual.

First seen at—Age 14/52. Weight, 15 lb. 3½ oz. When the infant was fed on the left breast only and two bottles of Ambrosia.

15/52. 15 lb. 8 oz. Breast 6 a.m., 10 p.m.; 10, 2, 6, Ambrosia 5 oz.

17/52. 16 lb. 4 oz. Breast, 6, 2, 6, 10; Ambrosia, 4 oz. at 10 a.m.

The solitary bottle was continued until 34/52, when the weight was 22 lb. 6 oz.



(g) A case of pyloric stenosis—

1926. The chart below is one of a male infant operated on by Mr. Hughes for pyloric stenosis the day after the first visit to the Clinic on July 26th.

It will be noted that during the first month of its life the weight increased by 6 oz.; it illustrates the value of early operation in a case in which diagnosis is not in doubt.

The foregoing examples show some of the results of different methods, by no means exclusive, of breast feeding. If we are now to attempt to assess the work of the clinic, at least it may be said that it does no harm.

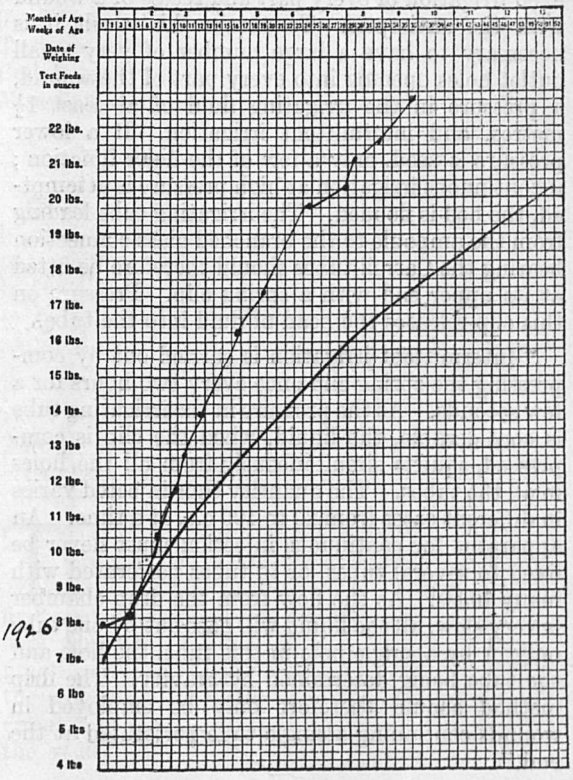
The self respect of the mother is not sapped by the distribution of largesse in the shape of dried milks or ointments and comforters, nor is the prescriptive right of the infant to its mother's milk jeopardised by the display and easy acquisition of patent foods.

Medicine is not degraded by advertising expedients, nor are attendances stimulated by the adoption of any of the devices employed by some municipal authorities. The family doctor in the neighbourhood is not robbed of his clinical material, or deprived of his opportunity of treating sick infants by the all-embracing activity of a state centre, which though in theory merely consultative or advisory, is in effect a hybrid chemist-grocer organisation presided over by a salaried salesman in the guise of a doctor.

The most that may be said is that the clinic has reduced infant mortality and preventable sickness —neither assumption capable of proof. The petrol engine by almost eliminating the horse, diminishing the number of flies and the ammonial infected dust, has probably affected the former, the lower birth rate the latter.

It is possible, however, that the clinic may justly claim to have trained the Borough mother in certain essentials of infant nurture, to have counteracted the advice of the wiseacre of "14 and buried 8." It may claim, too, to have taught many nurses the principles of infant feeding and how to handle mothers. It is even conceivable that its influence has extended to a doctor or a gynæcologist of the future, though the student who evinces any curiosity in a healthy baby is naturally uncommon.

Modern medicine suffers not a little from the lack of men of large experience. The old family practitioner who watched his patient from birth, through adolescence to manhood, is all but a memory. He talked in terms of diathesis, of



constitution, of tendencies and susceptibilities, but long intimacy with particular families made many a diagnosis probable and much advice sound.

No one knows all the remote effects of infant dietetic mismanagement.

Some of the immediate results are self evident, such as rickets and infantile scurvy ; but what are the antecedents of certain forms of ill-health, of nervous instability, or certain dominant traits of character ? Are any of these traceable in part at least to a time when a distracted household wrestled despairingly with a refractory stomach.

Train the child in the way it should go ; there is more in this saying than meets the eye.

My acknowledgment is due to Dr. Cameron for permission to publish these notes and for helpful criticism, also to the Sister of the Centre for much help in the arrangement of this paper.

Correspondence

"Carrell-Dakin" Irrigation

To the Editor of the GAZETTE.

SIR,—A tradition appears to have arisen at Guy's that the Carrell-Dakin method of wound treatment implies instillation of fluid into the tubes by the drip method. So firmly is this tradition established, that I have the greatest difficulty in persuading house officers to instal, or sisters to use, the apparatus correctly. Since the use of a drip feed in connection with Carrell tubes not only robs the method of any value it may have, but is a negation of the principles underlying it, I venture to restate these principles.

The whole essence of the Carrell treatment is the even irrigation of every part and recess of a wound with the antiseptic. To obtain this result it is necessary to have a large number of very small outlet holes opening into every part of the wound, a pressure in the irrigating fluid of at least 1½ metres, and intermittent irrigation. If a lower pressure is used, only a few of the holes function ; if continuous irrigation at high pressure is attempted, the bed is flooded. The irrigating tube leading from the ampoule to the branched glass connection bearing the Carrell tubes should therefore be fitted at its upper end with a spring clip. Pressure on this clip releases the head of fluid into the tube.

"Intermittent irrigation is carried out by compressing the spring clip once every two hours for a few seconds. As the pressure in the irrigating tube is considerable, the liquid, when the clip is compressed, squirts simultaneously from all the holes in all the tubes. The quantity thus injected varies in different cases from 20 to 100 c.c. at a time. An apparatus for continuous injection must never be fixed to several tubes, or to tubes perforated with many holes. As the flow from the drop chamber is very slow, all the liquid will pass out by one tube only or by a single hole in this tube, the hole and the tube being determined by gravity. The drip method should therefore only be employed in wounds containing a single tube perforated at the end."

These directions are taken from pages 97 and 110 of : "Le Traitement des plaies infectées," by A. Carrell and G. Dehelly. The translation, free, but accurate in essentials, is my own.

I am, Sir,
Yours faithfully,
W. H. OGILVIE.

105, Harley Street, W.1.

Death of Mr. G. S. H. Barnett

To the Editor of the GAZETTE

SIR,—It is with regret that I have to inform you of the death of Mr. G. S. H. Barnett, who studied medicine and dentistry at your Hospital.

Mr. Barnett was held in high esteem by both the medical and dental profession in this part of Queensland, both for his excellent work and his high standard of ethics.

He had a large circle of personal friends also, by whom he will be sadly missed.

The death took place on the 22nd April after a long illness.

SAMUEL J. FISK.

Stanthorpe, Queensland.

Guy's Hospital Gazette
(ESTABLISHED 1872)
Published on Alternate Saturdays. Price 9d.
Editorial and Publishing Office :—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.
Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, **12s. 6d.** Post Free, payable in advance.
A Journal of Hospital News, Medicine, Surgery and Dentistry.
The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Nursing News

The College of Nursing Endowment Fund

RECENT activities on the part of the Nursing Staff have acquainted other members of the Hospital of the fact that the College of Nursing is endeavouring to complete its endowment fund of £100,000 this year.

Her Majesty The Queen has graciously consented to receive purses of £100 each in June. At the beginning of April, Guy's nurses commenced their campaign to raise money to make a purse. By the end of May, over £500 had been collected. It is felt that Guy's Nurses who had left the Hospital will be interested to hear of the various efforts that have been made.

The Governors of the Hospital have generously subscribed nearly £100 and it is largely owing to the facilities granted by the Hospital Authorities that much of the remainder was raised.

Past members of Guy's Hospital Nursing League have contributed over £100. Donations have come in with good wishes from all parts of the world.

An "All Laughter" Matinée organised by Miss Billie Bristow, on May 18th, brought in nearly £100. Energetic nurses left the Hospital at 5.30 a.m., driven by more energetic chauffeurs to the great markets of the Metropolis, to persuade buyers and sellers to fill the 2,000 seats in the Plaza Theatre.

The Concert given by the Nursing and Massage Staff on May 27th and 28th, was a great success, and realised nearly £50.

The Physiological Theatre was kindly lent by Prof. Johnston and Prof. Pembrey, and the Works Department worked wonders in the way of erecting "scenery and effects." The programme contained orchestral items, songs, dances, recitations, a very amusing surprise item, and finished with a topical play.

A very enjoyable dance was held in the Out-Patient Department on May 14th. A good many Guy's Nurses will remember how jolly Out-Patient dances can be, and this one appeared to be no exception to the rule.

On one Saturday afternoon a delightful "Tea with Music" was arranged in the Nurses' Home, and later supper with more music and charades. This brought great talent to light from under the proverbial bushel. The Night Nurses also arranged a similar small concert.

The Preliminary Training School did very well in making and selling cakes, jam and sweets.

At 2 o'clock one afternoon, the Colonnade was exceptionally crowded. This was no ordinary gathering of Firms awaiting their Chiefs. Presently a nurse arrived and distributed mysterious leaflets in exchange for an equally mysterious ticket. The recipient glided swiftly away among the crowd and so began the treasure hunt. The treasure was a £1 note and clues were cunningly laid in various parts of the Hospital. High and low joined in the chase.

Many Nurses took collecting cards and the remainder of the money was collected by such efforts as Raffles, Jumble Sales, Old English printed door cards, Stocking Darning, etc., etc.

The Presentees were chosen by ballot and were as follows:—

Miss A. N. Phillips—Past Member G.H.N.L.; Miss Birdseye (Sister Naaman), Nurse K. Jenkins, Nurse Temple—Present Nurses.

Nurse Shackles and Nurse Opie helped to form the Guard of Honour.

Below is a list of amounts collected to date:

	£	s.	d.
Past Members G.H.N.L.	116	17	6
Governors of the Hospital	97	1	0
Plaza Matinée	85	4	3
Concert in Physiological Theatre	48	11	8
Out-Patient Dance	28	10	4
Small Concerts	10	7	10
Preliminary Training School	8	18	0
Jumble Sale	10	10	0
Treasure Hunt	3	0	0
Collecting Cards	58	15	0
Miscellaneous	37	11	2
Total	£505	6	9

On May 30th the sum of £22,701 0*s.* 2*d.* was handed to Her Majesty The Queen, which added to the amount previously collected brings the total to £95,520 13*s.* 5*d.* This leaves only £4,479 6*s.* 7*d.* to be raised this year to complete the £100,000 required.

Reviews of Nursing Books

Theory and Practice of Nursing. By M. A. GULLAN. Published by Messrs. Lewis & Co. *Price* 9*s.*

THIS well-known book on Nursing has been brought out in its third edition. It provides a most useful groundwork for nurses in their first year of training. It connects up the physiology which the nurse is then studying, with the practical aspect of this subject, with which she is at the same time in contact in the wards (*e.g.*, the circulation of the blood, the cardiac rhythm and the study of the pulse in health and disease).

Nursing procedures are carefully explained, and though the book does not set out to be exhaustive as a text book or as a book of reference, it deals very helpfully and thoroughly with the nursing of the main groups of diseases. It is a book which should certainly be on the shelves of every nursing library.

Hygiene for Nurses. By GUY and LINKLATER. Published by Messrs. E. & S. Livingstone, Edinburgh. *Price* 5*s.*

THIS book is one of many published during the last few years to supply the first year nurse with all the subject matter requisite to pass the Preliminary State Examination in Hygiene. It possesses a definite advantage in emphasising the importance of Personal Hygiene and Dietetics, and in giving less space than in most text books to Communal Hygiene, water supplies, drainage systems, etc. This seems to link up the study of hygiene with the nurses' work and to make it a more practical and useful subject. The book can be recommended with confidence to nurses who require a concise and reasonable text book for examination purposes.

Who's Who in the Nursing World. Published by London Professional Publications. *Price* 5*s.*

THIS book has been brought up to date for the year 1930, and contains a fund of useful information. It should be found of value to the Administrative Staff of Nurse Training Schools and for all those whose work brings them into touch with the administrators and teachers in other Hospitals. The lists of General and Special Hospitals with the names and qualifications of their Matrons appear to be complete, not only for London, but also for the provinces, and in addition there is much useful information regarding the various nursing services. It is a cheap book which should be a valuable addition to office reference books, and to all Nurses' Reading Rooms and Clubs.

Sport

Rugby

Owing to lack of space in the last issue of the *Gazette*, it was impossible to include the chart, now published on the following page of this number; it should have appeared along with Mr. Roy Holloway's statistical review of the season.

Cricket

Guy's v. Private Banks and Wimbledon

THERE is every prospect of the Hospital having a good season in 1930. There is a great deal of new talent and both the batting and bowling of the 1st XI should be considerably stronger than they were last year. Unfortunately the weather has been so unkind that it has been almost impossible to get a line on anyone's true form. The 1st XI have played five matches and have won three of them, the other two being ruined by rain. These were the matches against Private Banks and Wimbledon, and in each case Guy's did not get their knock, after fielding all the afternoon. Against the Private Banks, W. Lewis and O'Shea each bowled well and took three wickets, and against Wimbledon Durr took 5 for 45 and W. Lewis 4 for 47. The fielding was also good, as it has been in all the matches so far.

Guy's v. The Wanderers

PLAYED at Honor Oak Park on Wednesday, 7th May, and resulted in a win for Guy's by 9 wickets.

Scores—Guy's, 108 for 1; Wanderers, 107.

Guy's

S. R. Peatfield, not out	120
T. D. Ridsdale, c. Lewis, b. Harte	42
J. A. G. Starnes, l.b.w., b. Wheeler	32
H. Cameron, st. Lewis, b. Wheeler	10
Extras	13
Total for 3 wickets	217

G. J. Clarke, R. J. Eustace, R. V. Payne, W. Lewis, J. Durr, R. M. Outfin and J. P. O'Shea did not bat.

Bowling—J. P. O'Shea 3 for 24, J. M. Durr 5 for 35, G. J. Clarke 1 for 0, W. Lewis 0 for 23, R. V. Payne 1 for 10.

Guy's v. Honor Oak

MATCH played at Honor Oak Park on Saturday, May 17th, and resulted in a win for Guy's by 5 wickets.

Scores—Guy's, 186 for 7; Honor Oak, 134.

Guy's

S. R. Peatfield, c. & b. Turner	17
T. D. Ridsdale, c. & b. Maxwell	19
W. Lewis, b. Maxwell	39
J. A. G. Starnes, c. Mullen, b. Maxwell	8
R. V. Payne, b. Weymouth	9
H. Cameron, c. Nichol, b. Edwards	35
L. E. Marshall, run out	32
G. J. Clarke, not out	6
J. M. Durr, not out	12
Extras	12
Total for 7 wickets	186

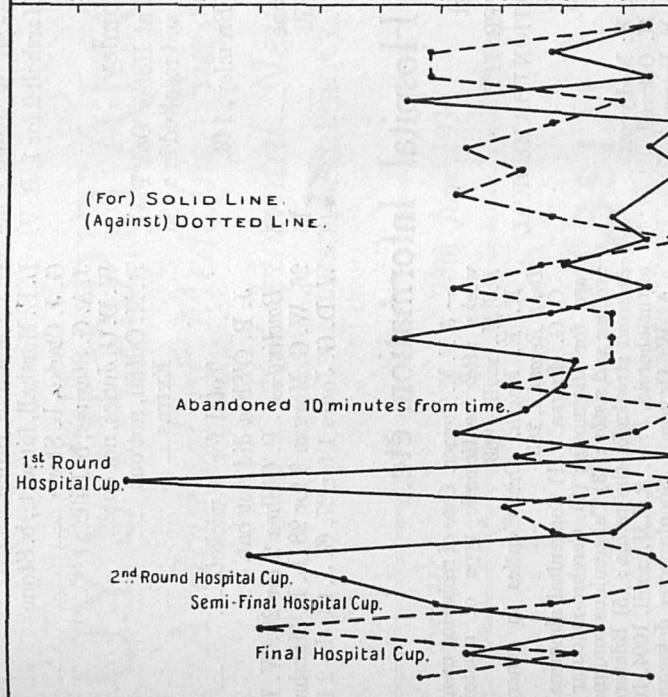
GUY'S HOSPITAL R.F.C.

SEASON 1929-30

(For) — TOTAL POINTS — 322 — Average Points per Match 11·5

— Percentage — 44·7%

(Against) — TOTAL POINTS — 311 — Average Points per Match 11·10


Points
50 45 40 35 30 25 20 15 10 5 0
(For) SOLID LINE.
(Against) DOTTED LINE.
Abandoned 10 minutes from time.
1st Round Hospital Cup.
2nd Round Hospital Cup.
Semi-Final Hospital Cup.
Final Hospital Cup.

OPPONENTS	DATE	G	F	A	Points For	Points Against	SCORE For G	SCORE For T	SCORE Against G	SCORE Against T	GOALS	TRIES
	1929											
Catford Bridge	Sept. 21	H	3	3	–	1			1+	–		Atkins.
Coventry	" 28	A	11	21	1	2	3	2			Hogbin	Atkins 2, Clogg.
United Services	Oct. 5	A	3	21	–	1	3	2				Robinson.
U.S.C. Old Boys	" 12	H	23	5	4	1	1	–			Hogbin 4	S. Fichardt 2, Robinson, Hogbin, Batchelor.
Old Mill Hillians	" 19	A	0	11	–	–	1	2				
Harlequins	" 26	A	3	18	–	1	3	1				Morgan.
Northampton	Nov. 2	A	0	13	–	–	2d	2				
Cambridge Univ.	" 6	A	3	19	1+	–	3+	2			Hogbin +	
Coventry	" 9	H	6	11	–	2	2+	1				Robinson 2.
Old Leysians	" 16	A	3	0	–	1	–	–				Thomas.
Old Alleynians	" 23	H	10	13	1d	2	2	1			Thomas d.	Robinson 2.
Gloucester	" 30	A	3	19	1+	–	3+	2			Hogbin +.	
Birkenhead Pk.	Dec. 7	A	11	6	1	2	1×	1			Wailer.	Robinson, Thomas, Popplewell.
United Services	" 11	H	24	6	4+	2	–	2			Hogbin + 4	W.H. Lewis 2, Popplewell, Robinson, Johnson.
Aberavon	" 14	A	9	6	–	3	–	2				Johnson, Lashmore, Smith.
	1930											
Old Merchant T.	Jan. 4	H	10	15	2	–	3	–			Hogbin 2.	Giesen, Ryan.
London Scots.	" 11	H	13	0	2	1	–	–			Wailer 2.	G. Morgan, W.H. Lewis, Malone.
Birkenhead Pk.	" 18	H	19	4	2	3	1d	–			Wailer 2.	Johnson 2, W.H. Lewis 2, Batchelor.
Gloucester	" 25	H	0	14	–	–	3++	1				
Middlesex Hos.	Feb. 4	N	46	0	5	7	–	–			Hogbin 4, Wailer 1.	Giesen 3, G. Morgan 2, Howell 2, Malone, Ryan, T. Morgan, Johnson, W. Lewis.
Aberavon	" 8	H	3	15	1+	–	2d	2			Hogbin +.	
Cambridge Univ.	" 12	H	6	11	–	2	1	2				G. Morgan, W. Lewis.
Old Blues	" 15	H	36	3	6	2	1+	–			Hogbin 6.	G. Morgan 2, Hogbin 2, Giesen, T. Morgan, Robinson, Ryan.
St. Mary's Hos.	" 18	N	28	0	4d	3	–	–			Hogbin 3, W. Lewis d.	Johnson 3, G. Morgan, Robinson, Lashmore.
Kings College Hos.	" 27	N	21	11	4+	1	1	2			Hogbin 4+.	Johnson 2, W. Lewis, Robinson.
Bristol	Mar. 1	A	7	35	1d	1	5+	4			Atkins d.	Atkins.
Bart's Hos	" 19	N	18	9	4d+	1	1+	2			Hogbin 3, W. Lewis d.	Johnson, W. Lewis.
Bristol	" 29	H	3	22	–	1	2	4				R.K. Robinson

PLAYED 28. WON 12. DRAWN 1. LOST 15.

\+ Indicates Penalty Goal
d " Drop Goal
× " Goal from Mark

R. M. Outfin and J. P. O'Shea did not bat.

Bowling—J. P. O'Shea 3 for 30, W. Lewis 4 for 50, J. M. Durr 1 for 31, L. E. Marshall 2 for 1, R. V. Payne 0 for 12.

Guy's v. Bromley

THIS match was played at Honor Oak Park, on Saturday, 24th May, and resulted in a win for Guy's by 2 wickets.

Scores—Guy's, 156 for 8 ; Bromley, 143.

Guy's

S. R. Peatfield, c. Short, b. Stone	15
T. D. Ridsdale, c. Moore, b. Hill	15
W. Lewis, c. Fraser, b. Hill	48
W. G. Morgan, c. Brown, b. Moore	19
H. Cameron, b. Stone	19
L. E. Marshall, hit wkt., b. Stone	0
G. J. Clarke, b. Stone	1
J. A. G. Starnes, b. Hill	4
W. D. G. Jones, not out	5
R. M. Outfin, not out	25
Extras	5
Total for 8 wickets	156

J. P. O'Shea did not bat.

Bowling—J. P. O'Shea 2 for 28, W. Lewis 2 for 26, W. G. Morgan 3 for 28, L. E. Marshall 0 for 10, W. D. G. Jones 1 for 27, G. J. Clarke 2 for 11.

Hospital Information, etc.

Pass List

LONDON UNIVERSITY

THIRD (M.B., B.S.) EXAMINATION FOR MEDICAL DEGREES.

May, 1930.

PASS.

E. T. Conybeare
H. B. A. R. Densham
S. N. Evans
C. S. Gross
J. C. Heather
A. N. Jones
H. G. McGregor
B. R. Medlycott
C. M. Ockwell
G. F. Peters
H. Richards
T. T. Stamm
G. P. B. Whitwell

GROUP I.

H. J. Croot
J. B. Robinson
H. H. Steadman

GROUP II.

W. L. M. Bigby
O. Plowright
E. B. Rogers

Notice

Guy's Hospital Past and Present Nurses' League

A REUNION Garden Party will be held at the Nurses' Cottage, 30, Dunoon Road, Devonshire Road, Honor Oak Park, on Wednesday, June 18th, from 3 to 6 p.m. All Past Guy's Nurses are welcome.

R.S.V.P. to the Matron by Tuesday, June 17th.

Trains from London Bridge (Brighton Section), 2.38, 2.53 and 3.8 p.m.

Papers by Guy's Men

R. B. Brooke. Improved radium needle introducer, *B.M.J.*, 1930, i, 1055.

N. Flower. A traction frame for fractures of the leg, *Lancet*, 1930, i, 1240.

W. J. Jewell. Actinomycosis of the brain, *Proc. R.S.M.*, xxiii, 1062.

T. B. Layton. On signing your name, *Lancet*, 1930, i, 1200.

— & F. M. Turner. Case of recurring meningitis three weeks after septicæmic type of mastoiditis, *Proc. R.S.M.*, xxiii, 1063.

H. E. Marsh. Orthodontics in general practice, *Dent. Record*, l, 263.

O. G. Morgan. (1) Congenital abnormality of disc, case for diagnosis ; (2) Cerebro-macular disease in brother and sister ; (3) Tuberculous conjunctivitis ; (4) Angeoid streaks in the retina ; (5) Bilateral coloboma of the choroid, *Proc. R.S.M.*, xxiii, 1004, 1005, 1006.

A. W. Ormond. Spontaneous detachment of the retina, *B.M.J.*, 1930, i, 940

—(1) Defective vision due to birth injury ; (2) Arachnodactyly ; (3) Specimen from a case of leprosy in the eye, *Proc. R.S.M.*, xxiii, 1004.

A. A. Osman and H. G. Close. A clinical and biochemical study of the subnormal child, *Arch. Dis. Child.*, v, 149.

L. A. Parry. The oldest medical act ? *B.M.J.*, 1930, i, 960.

E. A. Peters. (1) Excessive development of the styloid processes ; (2) Sections of tonsils, *Proc. R.S.M.*, xxiii, 931, 932.

J. A. Ryle. The radial pulse, *Clin. Jour.*, lix, 253.

C. Worster Drought. Deformities of hands and feet following several attacks of acute rheumatism, *Proc. R.S.M.*, xxiii, 948.

— and T. R. Hill. Treatment of chronic encephalitic Parkinsonism with dried preparations of stramonium, *Lancet*, 1930, i, 1240.

Change of Address

H. O. Long, M.R.C.S., L.R.C.P., Dene End, Denewood Road, Highgate. *Mountview* 1847.

Appointment

J. D. Cambrook, M.R.C.S., L.R.C.P., L.D.S., Chief Assistant in the Dental Department, St. Bartholomew's Hospital.

Marriage

GREENWOOD–JONES—On Saturday, May 31st, 1930, at MazeHill Congregational Church, Greenwich, Eric John Greenwood, M.B., B.Ch., only son of Mr. and Mrs. E. N. Greenwood, of Blackheath, to Dorothy Helen Jones, elder daughter of Mr. and Mrs. W. G. Jones, of Greenwich.

EDS. {J. B. B. P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *28th June* 1930 — *Number* 1094

PASSIM

RUMOUR has it that an historic decision in the story of the Hospital is about to be made—some say even that it has already been made—namely, to alter the start of the Hospital week from Wednesday to Tuesday. This represents an act of courtesy on the part of the House Committee, as the alteration has been made especially to enable the House Officers of the week to meet the House Committee on Wednesday morning at 10 o'clock, without having to forgo their breakfasts or to stifle yawns, suggestive of ill-breeding but actuated by lack of sleep. The privilege of attending the House Committee Meetings on Wednesday mornings is one which, though appreciated by House Officers, has not been taken advantage of fully in recent times. It is the one opportunity afforded to House Physicians and Surgeons of coming directly into contact with the Governors of the Hospital, and of putting forward suggestions as to alterations of details, which may benefit patients, dressers or clerks. Moreover, it is a gesture of graciousness on the part of the Governors, and one of which we are certain more and more use will be made when Take-in week finishes on Tuesday instead of on Wednesday. Hitherto the spirit has been willing, but the flesh weak.

▭

AT a moment when we do not seem to be meeting with success in Inter-Hospital events (we have been beaten by St. Thomas's in the Cricket Cup and lost the Athletic Sports), we heartily congratulate the Tennis VI on winning the first round of the Tennis Cup, against St. Thomas's, and the second round against U.C.H.

We also learn that the nurses won the first round of their Inter-Hospital Cup, defeating U.C.H.; they meet St. Thomas's in the next round.

▭

THIS year the Annual Gala of the United Hospitals' Swimming Club will be held at the Bath Club on Tuesday, July 1st, at 8.15 p.m. In addition to the inter-hospital swimming, diving and water-polo championships, the nurses' inter-hospital swimming cup will be contested; there will also be exhibitions of fancy diving. This is always a very popular event of the summer months, and it is to be hoped that the support from Guy's will be even stronger than in the past.

Tickets may be obtained from Mr. J. Howell, Hon. Sec., Guy's Hospital Swimming Club, The College, Guy's Hospital, S.E.1.

▭

As we gently puffed the best pipe of the day, that which follows breakfast, our eye scanning the morning paper last week discovered an odd

paragraph of peculiar interest: "At an extraordinary general meeting of the British Anti-Tobacco and Anti-Narcotic League (Incorporated), resolutions were passed that the league be wound up voluntarily." So died a cause than can never have prospered; no doubt it was founded on the original injunction, "Cut down Smoking," so often heard from medical lips, but having even less national appeal than the recent, but equally admirable conservative slogan, "Safety First."

We wish to draw attention to a notice appearing on another page with regard to the prize offered annually by the British Medical Association for an essay by a final-year student or newly-qualified practitioner. For 1931, the Competitor is asked to "Describe and discuss cases illustrating the modern methods of the Diagnosis of early Pulmonary Tuberculosis." We trust that in nine months' time we will again be able to congratulate a Guy's man on winning the prize.

Two Examples of Abdominal Tuberculosis

A Clinical Lecture by Dr. Geoffrey Marshall

GENTLEMEN,—Our first patient is a girl of fourteen who was admitted into the Clinical Wards on the 15th February. For three months previous to this date she had been complaining of backache, and a fortnight before admission she was confined to bed with a sore throat and fever. A doctor was called in and found her abdomen distended, so sent her to hospital. On admission she was found to be pyrexial, the morning temperature being just above normal, and the evening temperature between 100° and 101°F. She was thin and the cervical lymph glands were palpable, while the abdomen was greatly distended and presented the signs of free fluid, *i.e.*, shifting dullness and a wave of fluctuation. Paracentesis was performed and five and a half pints of fluid were withdrawn. The fluid was clear and straw-coloured, it was sterile and no organisms could be found in it. The peritoneum filled up with fluid again and it was drawn off on several occasions, while the pyrexia continued unabated. At the end of February, Mr. Hughes was asked to open the abdomen, and when he did so he found the peritoneal coat of the intestines studded with small tubercles. He mopped out the fluid and closed the abdomen without drainage. Shortly afterwards the temperature fell to normal and it has remained so since. The child is now putting on weight and is shortly being transferred to a sanatorium.

This is a typical case of tuberculous peritonitis of the ascitic variety, and the diagnosis was made without difficulty. The occurrence of ascites and pyrexia in a young patient is almost diagnomonic of tuberculous peritonitis; but we have to exclude other causes of ascites. These are heart-failure, nephritis, cirrhosis of the liver, malignant disease and acute septic peritonitis. With the first two we should find other evidence of disease of the heart or kidneys and there would be dropsy of other parts of the body; in cirrhosis the liver is usually enlarged and hard and the veins on the abdominal wall are distended: in malignant peritonitis hard tumours are to be felt in the abdomen, while in septic peritonitis there is a history of sudden onset with severe pain, and the patient is profoundly collapsed by the time that the abdomen has become distended with free fluid.

In the ascitic form of tuberculous peritonitis the fluid obtained by paracentesis is usually clear and of a greenish-yellow colour, though in very acute cases it may be blood-stained. It has a high protein content, and microscopic examination reveals numerous lymphocytes. Tubercle bacilli are seldom found in the fluid, and injection into a guinea-pig will give a positive result in only 50 per cent. of cases.

The ascitic form of the disease is the one which most commonly affects children, and it is secondary to a focus elsewhere. A common site for this focus is a caseating bronchial lymph gland, and invasion of the peritoneum occurs through the blood-stream. Laparotomy will usually reveal, as it did in this case, innumerable miliary tubercles on the peritoneum covering the intestines, and arranged along the course of the arterial branches.

With regard to prognosis, the prospect of recovery is good in this case. The subsidence of the pyrexia and the gain in weight show that the disease is becoming less active, and prolonged treatment at the sanatorium is likely to lead to a complete arrest of the disease. The ascitic type of tuberculous peritonitis is the one which responds most readily to treatment, and children generally do better than adults.

Treatment must be considered under two heads, local and general. When there is sufficient fluid to cause distension of the abdomen, it should be withdrawn by paracentesis, and if it continues to collect after the second or third tapping, the peritoneal cavity should be opened and mopped out.

Operation is by no means certain to benefit the patient, but it sometimes leads to a subsidence of the pyrexia, as it did in this instance. A similar diminution of toxæmia often follows aspiration of fluid from the chest in cases of tuberculous pleurisy. General or constitutional treatment should be carried out on the same lines as for other types of surgical, *i.e.*, non-pulmonary, tuberculosis. We are indebted to Dr. A. Rollier of Leysin for showing the brilliant results to be obtained by prolonged rest together with exposure of the skin to light and air. A patient, such as the one we are considering, should be kept lying down for at least twelve months, and the whole of her skin should be pigmented by daily exposure of the body to natural sunlight. This is not the occasion to enter into details of the treatment, but it is necessary to warn you that the exposures must be very short at the beginning of the treatment, and that while the light rays are beneficial, the heat rays are harmful, so that in the summertime, direct sunlight is used only in the early hours of the day.

If the treatment of this patient is carried out efficiently, we may expect a favourable result, because of her youth and because the disease is of the most favourable type. In older patients it is much more difficult to arrest the infection, even when they survive for years. Some time ago I saw a middle-aged woman who was suffering from this condition, and she showed me her temperature charts which were bound in volumes covering a period of nearly twenty years, and throughout all that time there had been an evening pryexia in the neighbourhood of 100°F. While in children the sexes are affected equally, in adults there is a much higher incidence in women than in men, probably because the infection commonly spreads to the peritoneum from a tuberculous Fallopian tube. Besides the ascitic form of the disease, two other varieties are described, the fibroid and the caseous. The fibroid type may follow an acute onset with ascites, but it is often dry from the beginning, and runs a very long and apyrexial course. The intestines become matted together by adhesions which may completely obliterate the peritoneal cavity; the patient suffers from colicky pain and becomes emaciated.

In the caseous type the tubercles coalesce to form palpable tumours, and these are apt to ulcerate and lead to the formation of fistulæ. The chief symptoms are pain, diarrhœa and fever, and a fatal termination from secondary septic infection of the peritoneum is common.

Our second patient is a trained nurse, aged 24 years, who was admitted to the ward in March. For about four months she had noticed excessive fatigue and a steady loss of weight; and during the last two months there had been intermittent diarrhœa, colicky abdominal pain and amenorrhœa. She had been taking her temperature, and found that it was usually raised to 99 or 100°F. in the evenings.

On admission it was found that her morning temperature was usually between 98 and 99°F., while in the afternoons it would rise to 100°F. and occasionally to 102° F., and the pulse-rate was often as high as 120. The abdomen was rather full, the bowels loose and the motions fluid. Bacteriological and serological investigations were made for evidence of infection with the organisms of typhoid and paratyphoid fever, and the results were negative. Further investigations for evidence of bacillary dysentery were also negative, nor were any pathogenic bacteria found in the stools.

When I first saw the patient these investigations had already been carried out, so that the diagnosis was simplified. I found her to be hirsute, with fine downy hair covering the shoulders and arms; this, together with the hectic type of pyrexia suggested tuberculous infection. On looking at the abdomen you will see that while it is not distended, it has not the normal contour; it presents a very slight but even convexity due to loss of tone in the muscles of the abdominal wall. On deep palpation there is some tenderness in both iliac fossæ, where, I think, one can also detect fullness or infiltration. The motions are fluid, they contain an excess of fat, but no blood and no excess of mucus.

This is an example of tuberculosis of the abdominal lymphatics, with enlargement of the mesenteric and retro-peritoneal lymph glands. The latter undergo caseation or calcification, and a skiagram of this patient's abdomen shows that some of these glands have already become opaque to X-rays. The diagnosis is more difficult than in the case of tuberculous peritonitis, for in the latter the abdomen usually presents obvious signs of distension with a fluid effusion or with doughy tumours.

Tuberculosis of the abdominal lymphatics or *tabes mesenterica* is one of the causes of obscure pyrexia. There is a very prolonged fever which goes on for months or even years, with few localising symptoms. Pain is usually slight, and although the bowels are loose, the diarrhœa is not sufficiently violent to cause complaint.

When the patient comes under observation, infection with one of the typhoid group of organisms is usually suspected on account of the prolonged pyrexia, the full abdomen and the looseness of the bowels. The absence of agglutination reactions between the patient's serum and the typhoid and paratyphoid bacilli does not absolutely exclude enteric fever, but there are clinical features which help us to distinguish between these con-

ditions. In enteric fever there is usually an abrupt onset with severe and persistent headache, followed a few days later by cough and by the appearance of rose-spots on the skin. The spleen is often enlarged and the motions frequent and watery, the pulse is slow in relation to the temperature, the tongue is very dry and the patient is often dull and lethargic. In tabes mesenterica, on the other hand, headache is not a prominent feature: there are no rose-spots, no enlargement of the spleen, the motions may be unformed, but this will be due to an excess of oily fats rather than of water; the pulse is rapid, the tongue is moist, and there is not the least dulling of mentality. In enteric the pyrexia usually subsides at the end of the third week, while in tabes mesenterica it is likely to continue for months. Dysentery and other forms of colitis are excluded by inspection of the stools, for there is an obvious excess of mucus in those conditions, while in tabes mesenterica there is not.

With regard to prognosis, the inflammation often subsides spontaneously and the glands become calcified. This process, however, may take many years, and during the whole of that period the patient is a semi-invalid, incapable of ordinary work, wasted, anæmic and subject to abdominal discomfort. If the disease attacks a child, its growth is seriously interfered with, so that it never attains full stature and nutrition. For these reasons it is important to recognise the disease early and treat it effectively. The treatment is the same regime of prolonged rest and exposure to ultra-violet light that we prescribed for the patient with tuberculous peritonitis.

Drugs are of little value, and cod liver oil is definitely contra-indicated. Owing to their inflammation, the abdominal lymphatics are unable to exercise their normal function of absorbing fats from the intestine, and the abdominal discomfort and diarrhœa are greatly benefitted by cutting out milk and other fats from the diet. Nutrition must be maintained by a generous supply of meat, vegetables, fruit, glucose and other carbohydrates.

In conclusion I must thank Mr. Reading for the very complete data he has given me from his reports on these two patients.

No Change

WE have recently been so fortunate as to receive a gift of several copies of the *Guyoscope*. We intend sharing our good fortune to the best of our abilities. The following two extracts, though written thirty-two years ago, are still topical; they are in fact perennially so.

THE NEW MATERIA MEDICA

By U. PALE QUITE

WOMAN.

Natural Order.—After man.

Source.—Rib (probably resection for empyema.)

Characters.—Changeable. In commerce it is nearly always dressed up. In crude state—certain parts of Africa, etc.

Composition.—Active principle—tongue. Less active principle—brain. Sometimes no principle at all.

Impurities.—Acne, flat feet, etc.

Preparations.—

1. Nurses.—Never infringed, but largely wasted. A very popular preparation, generally taken by medical students—action most marked at night and at Christmas time (sometimes leading to the browsing habit). To be taken scrupulously. One spoon = ½ oz.

2. Barmaids.—Tincture—very lavish preparation. Strong affinity for peroxide. In excess—vertigo.

3. Ballet girls.—Powdery preparation. Dram-(atic) doses.

4. Cyclists—Scorching action. — Precipitates everything (men for choice).

5. Widows.—The drug is here in the nascent state and particularly liable to combine.

Modes of Action (generally breach of promise).

1. Eyes.—Spasm of orbicularis palpebrarum. (The office boy, in conjunction with one of the ophthalmic clerks, is writing a somewhat elaborate paper on this subject, to be read before the Sparrick's Row Fizzical Society—Dan the Dustman in the Chair, supported by Bill Natty as Ejector).

2. Arms.—Involuntary circular action.

Compatibles.—Chocolates, bicycles, hairpins, etc.

Incompatibles.—Mice — logic — beetles — other women, etc.

In 1898, we fancy the editorial head was safe from caustic comment on the part of women, but in these days of emancipation we tremble to think of what Monday's post may bring by way of retort should one of them read the above.

SPECIALISM:

A Study in Probabilities.

Scene: Out-Patient room in no particular hospital, sometime in the next century. Enter patient, middle-aged, male. He walks with a limp and complains of pains in the right great toe.

Surgeon (to Class): In these enlightened days, gentlemen, it is our duty to discover all we can about our patients. No possible source of knowledge must be left untapped. I will, therefore, before treating this patient, follow up the usual routine and send him to the specialists.

(Exit patient armed with notes to the aforesaid specialists. He returns in the course of some hours with these gentlemen's reports, which are then read to the assembled somnolent throng.)

(1) From the Abdominal Surgeon: "I have examined this patient's abdomen very thoroughly and find no tumour; I should have advised him to have his appendix removed had he not informed me that his general practitioner had already done so. He has indeed brought the organ in a bottle with him; it appears quite healthy."

(2) From the Genito-urinary Surgeon: "I have subjected this patient to the most searching examination, have cystoscoped his bladder and kidneys, but find them perfectly healthy. From the history of the case I should be inclined to think that the patient has at some time passed a large calculus which, falling on his toe, has caused the pain complained of."

(3) From the Dermatologist: "A singularly perfect example of 'cutis nigra.' I should advise the following prescription:—

Sapo Mollis, ½ oz.
Liq. Potass,
Ol. Terebinth, of each, 1 pint,
Aq., q.s.

Sig., Misc., p.a. in balneo aquæ cathidæ."

(4) From the Neurologist: "An extremely interesting case. Hyperæsthesia of the great toe has been mentioned by Professor Koupetz, of Bozzh, as a fairly constant symptom of the recently described myxomatous degeneration of the folium cacuminis of the cerebellum."

(5) From the Ophthalmic Surgeon: "An obscure and difficult case of amblyopia. Patient declares that he suffers from periodic attacks of blindness. Fundus normal.

T=+ ? B.E.; V=6/6 some."

(6) From the Medical Officer of Health: "I found patient a nuisance."

Surgeon (log.):—We have thus, gentlemen, discovered many points of interest about this patient, which, in the old days, would have quite escaped us. Let us now look at the toe. I think Mr. —, you might arrange to remove the toe nail under an anæsthetic.

(Curtain.)

A Note on Multiple Adenomatosis

FIFTY years of research and thought productive of such stimulative writings as those of Albrecht, Lœb, Ewing, Nicholson and Gye, have but widened the conception of tumour formation. Yet academical teaching still comprises some three-fifths of itself upon old and erroneous views and theories, hence a thrust at any such myth should not prove so unproductive as its metaphor implies.

Multiple adenomatosis illustrated in the autopsy to be reported may appear to lend itself in McClung's or Maud Slye's Mendelian hands as strong evidence in support of such theory, whilst in truth even more strongly in opposition.

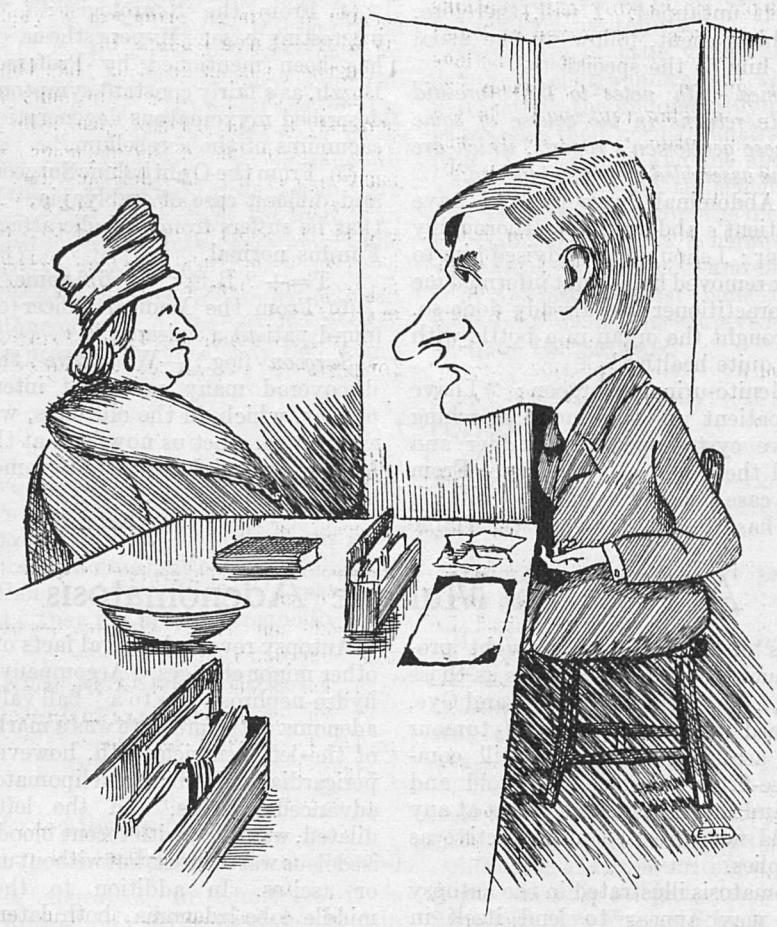
A man, age 60, was admitted in May for typical long-standing prostatic obstruction of progressive degree with evident incipient uræmia. The urine was purulent and contained B.C.C., Staph. Albus and blood; the blood urea was 12 times normal and the heart beat with a marked tic-tac rhythm. There was "retention with overflow." Sight grew misty, the pulse rapid and weak at 102, respirations rose to 32 and the patient drifted into coma, dying eight days after admission.

Autopsy revealed several facts of interest among other minor changes. Accompanying the bilateral hydro-nephrosis due to a "ball valve" middle lobe adenoma of the prostate was a marked hypertrophy of the left ventricle with, however, as marked a pericardial and subintimal lipomatosis. There was advanced cystitis, and the left pelvis, much dilated, was filled with recent blood clot. Generalised ileus was evident, but without uræmic ulceration or ascites. In addition to the pedunculated middle lobe adenoma, both lateral lobes of the prostate contained adenomata of varying size; further, both suprarenal cortices contained bright yellow adenomata, rather larger in the left, all, however, being large enough to exclude the possibility of their being of Virchow's "struma suprarenalis" order. Lastly, the thyroid gland was irregularly enlarged by the presence of multiple adenomata in both lobes, again of varying size and in addition several cystic.

There were no pineal, pituitary, thymus, mammary or testicular new growths.

Thus we have a systematic distribution of pure acquired hyperplasia which no Cohnheim, Adami or

"COMBINED ROUND"—CASE IV



L. J. W.—An Inimitable Anæmia

Ribbert could appropriate without grotesque moulding; to which the application of Weismann's germ plasm or Rous' virus-factor theories would strike hollow, and yet which might with ease be attributed to dominance of that particular—or recession of another—gland group as a Mendelian factor.

Mendelism, in so far as it concerns man, has yet to receive a single supporting case, and although the utter impossibility of selective breeding may be the cause of the absence of such striking manipulations of morphology and even site as occurred in Maud Slye's generations of mice, it is hard to believe that nature would not have afforded even imperfect evidence of a Mendelian sequence. Such a view, then, is one of resignation and precludes even the hope of making any impression upon the incidence of tumour formation.

It is not improbable that the proven interrelationship of function of the internally secreting glands of the body may also imply a very definite inter-dependence of cell division of such a nature that group hypo-activity or hyper-activity may invoke group hyperplasia of supplementary or oppositional nature respectively: that cases such as this are indicative of an environmental demand for equilibration of secretions.

Such a view demands elaboration in order to support the localised nature of the hyperplasia. It is not a vicious circle, for dietary and climatic changes in environment have long been accepted as causative of many a disequilibration of the balance of internal secretions. Hence it tallies, not only with known physiological reactions, but also with the philosophical interpretation of the nature of tumour formation so vigorously upheld by Albrecht and Nicholson.

Further, the assumption that the cause in this type is a change in environment as stimulus to perfectly normal physiological cells to divide is in itself a stimulus to investigation, rather than a passivism such as Mendelistic views imply.

New growth, however, is not to be attributed as a whole to any one cause, but to a combination of environmental changes of ever varying quality and degree, one result of which has here been encountered.

May I, in concluson, thank Professor Donaldson for permission to use these autopsy findings.

C. K. S.

Trigeminal Neuralgia

A Paper read before the Dental Society by Mr. S. C. Brown

MR. PRESIDENT AND GENTLEMEN,—Trigeminal Neuralgia, or Tic Douloureux as it is sometimes called, was first described in 1773 by Fothergill, a physician, in his monograph called "A Painful Affection of The Face." He mentioned fourteen cases, and on account of the persistent and severe nature of the pain he considered it to be due to a form of malignant disease.

Trigeminal neuralgia is now a well-recognised disease of obscure origin and is one of the most fearful scourges that can afflict mankind.

The boundaries between neuralgia and neuritis are really relative, for a severe and wide-spread neuralgia may be a sensory reflex from a neuritis of a few nerve filaments as is seen in the case of an acute pulpitis giving rise to a facial neuralgia. In practice the two conditions are roughly distinguished in that the term neuralgia defines a pain referred along a nerve trunk or its branches, often characterised by attacks of severe pain followed by intervals of freedom and not accompanied by trophic changes of the muscles, unless an organ has had its function interfered with by the severity of the pain; in neuritis the pain is due to pathological changes in the nerve trunks, the reflexes are impaired, and there is muscular wasting with cutaneous anæsthesia and trophic changes of the extremities.

Head[1] has divided the various facial neuralgias into four main classes:—

A. Neuralgia major or trigeminal neuralgia.

B. Neuralgia secondary to diseases of the nerves of the head, such as tumours and gummata invading the fifth nerve.

C. Neuralgia minor—

(*a*) Visceral referred pain due to diseases of the ultimate structure of some organ of the head.

(*b*) Dental neuralgia or true neuralgia minor.

D. Neuralgia secondary to general diseases, such as anæmia, hysteria, syphilis, etc.

Trigeminal neuralgia is in its early stages impossible to distinguish from neuralgia minor; but in the fully developed form the pain occurs in extremely violent paroxysms, and is never continuous, thus differing from all other types of neuralgia. It is even considered by some authorities to be a fundamentally distinct disease of the nervous system.

The geographical incidence of Tic Douloureux is perhaps of interest as it is commoner in cold climates, and there is an especially high incidence

in America, although this may be due to better systems of case recording.

There is a preponderance of females to males in the proportion of three to one—other things being equal women are in general more susceptable to neuralgias than men.

Tic Douloureux is a disease of middle life, although there is a record of a boy of ten, on the one hand, and patients of eighty and ninety, on the other, who have suffered.

Although heredity seems an unlikely factor in the ætiology of trigeminal neuralgia, in 2 per cent. of cases, according to Wilfred Harris,[2] a parent of the patient had also suffered, and Frazier quotes an instance of a family of twenty-two children where the mother and three of the children were victims of the disease.

Since the time of Fothergill the cause of trigeminal neuralgia has been the subject of much speculation and discussion. Some authorities believe that it is due to chronic degenerative changes in the gasserian ganglion, such as fibrositis and arterio-sclerosis. Rollinson Whitaker[3] declares that patients who are suffering from trigeminal neuralgia always show signs of arterio-sclerosis, while Harris has remarked upon the number of people with trigeminal neuralgia who also have disseminated sclerosis, and he does not think that the association can be explained in any theory of chance.

If trigeminal neuralgia is due to changes in the gasserian ganglion one would expect to find pathological evidence on microscopical examination, yet Rollinson Whitaker found absolutely no difference between 100 ganglia removed from normal patients and 24 ganglia removed from patients who had suffered from the disease. On the other hand, if arterio-sclerosis is the cause, why is the disease not more common ? However, when the age of incidence is considered it is not surprising to find evidence of arterial degeneration, probably incidental.

The neuralgia cannot be due to a lesion of the central nervous system or there would be trophic changes and less of sensation in some form or other, while on the other hand division of an affected nerve gives instant relief, proving that the condition is peripheral in origin.

New growths or chronic inflammatory processes invading the origin or course of the fifth cranial nerve will give continuous pain and anæsthesia of varying degrees, while a fractured skull involving the fifth nerve will give a persistant neuralgia with motor and sensory paralysis, but none of these symptoms are found in trigeminal neuralgia.

No sensory nerve endings in the whole body are so exposed to such constant septic irritation as the second and third divisions of the fifth cranial nerve, and chronic paroxysmal neuralgia, almost without exception, is found in these two divisions.

Long-standing oral sepsis and chronic sinusitis is often found in cases of trigeminal neuralgia, and it is not unreasonable to suggest that the primary cause is chronic septic irritation of the nerve endings, and this also explains why the first division is rarely primarily involved. That the removal of septic foci in the mouth or sinuses does not necessarily clear up the neuralgia may be due to the fact that the damage has already been done, and the removal of existing septic foci is not in itself sufficient to cure the condition. Septic infection originating in the temporary dentition may remain latent for many years and explain the cause of the neuralgia found in adults who have exceptionally good permanent teeth.

Some authorities consider trigeminal neuralgia to be due to a long-continued chronic peripheral irritation of the nerve endings, such as from oral sepsis and sinusitis, and Rollinson Whitaker believes that in 90 per cent. of the cases the existing cause is in the mouth.

Trigeminal neuralgia may often be brought into activity by the shock of violent emotion, and many patients date the onset back to the time when they have received the shock of hearing of the death of a relative, or the sight of a street accident.

A lady of seventy was seized with violent pains shortly after reading of the sinking of the *Lusitania*. Another woman was seized with a paroxysm of pain after being told that her child had been seriously injured in an accident. Both these women developed typical trigeminal neuralgias.

Sometimes emotion may have the reverse effect and arrest a pre-existing neuralgia. Sir John Lawrence, who was a sufferer for years, was relieved for a long period shortly after reading of the outbreak of the Indian Mutiny.

Some neuralgias have commenced after exposure to a cold wind or snow, and sufferers always take great care to avoid any such stimulation as it is liable to bring on an attack. Blows on the jaw or face often bring on a neuralgia major. The pain in these cases is characterised by the severity and suddenness of onset. The first attack often comes after some severe dental operation, such as the removal of an impacted third molar with undue force.

A woman of 55 had some teeth removed from her maxilla. The forceps broke during the operation and a piece of steel was left deep in the alveolus. Three weeks later neuralgic pains commenced and continued spasmodically for fifteen years. She was then X-rayed, the fragment removed and an infected antrum drained. She

still suffered, however, and she was eventually relieved by an alcohol injection ten years later.

At the commencement trigeminal neuralgia is always unilateral and usually limited to the second or third division, but as the disease progresses it may involve the supra-orbital branch of the first division and the whole of the second and third divisions, including the tongue. Occasionally the pain becomes bilateral.

The commencement of the disease is often obscure, and may start as a dental neuralgia without any striking symptoms, until after some time a sudden paroxysmal attack occurs and the true nature of the condition is revealed. On the other hand, the first sign may be a sudden and violent attack of pain in one or more branches of the fifth nerve, the paroxysms lasting only a few seconds. The next attack may occur in a few days or after several years perhaps; in one case the period was as long as thirty years.

As the disease progresses it tends to become chronic and the intervals of freedom become shorter. Sometimes the attacks become seasonal, occurring only during the winter months.

Some cases have scarcely any freedom from attacks which occur every few minutes, day and night, when the disease is in an advanced stage.

Spontaneous cures are almost unknown. In a typical paroxysmal attack, the patient is seized with a sudden and violent pain commencing at some particular spot supplied by the trigeminal nerve. The side of the nose and the mental foramen are common situations, but the pain often seems to start at the root of a tooth or on the alveolar ridge when the patient is edentulous. It spreads like a burning or intense stabbing sensation over the side of the face, ending in what can only be described as an explosion of agonising pain.

The attitude of the patient varies considerably during an attack. Some press or rub the face with the hand, and this causes a thickening and soreness of the cheek, and sometimes the eyebrows are destroyed. Others dare not touch the face, as this makes the pain still more intense. Often the mouth is held widely open, salivation and lachrymation occur, and there is a chronic facial spasm on the side of the face afflicted with the pain.

Some patients keep quite still when the pain comes on, others cry out and throw themselves on the floor and roll about in agony. In the *Guy's Hospital Reports* there is a case of a man who, during a paroxysm, seized a pair of scissors and with them extracted four of his teeth. He then committed suicide by throwing himself out of the window. At the post-mortem a large tumour was found invading the root of the 6th nerve. During the attack the pulse rate falls and the pupils become dilated.

One of the most characteristic signs of trigeminal neuralgia is the manner in which the attack may be provoked, such as a light touch on the cheek, a breath of cold air, or a morsel of food in the mouth. As stimuli have such terrible results, sufferers take elaborate precautions to avoid them.

Some spots on the face are much more sensitive to irritation than others, and these particular areas, from which the pain also seems to commence, are called "Trigger Zones."

The mental and infra-orbital foramen are two common situations. These spots are important clinically as they are an indication from what branch of the 5th nerve the neuralgia is commencing.

Occasionally a case of trigeminal neuralgia occurs with an absence of "trigger zones," which shows that although they are typical they are not a necessary sign of the disease.

Many patients who have trigeminal neuralgia are strong, healthy, unemotional individuals, yet there is no doubt that a large percentage of cases occur in persons who, if not exactly neurotic, are either highly strung and nervous or show signs of mental excitability in some form or other. With this second type of patient there is undoubtedly a greater susceptibility to light stimuli, so characteristic of this neuralgia.

The most difficult form of neuralgia to treat is met with in the neurotic patient. It is most necessary to beware of a pain which spreads across the mid-line, which tends to vary its position and extends outside the anatomical area of the 5th nerve, for this wandering pain is only found in the neuropathic patient.

The primary step in the treatment of trigeminal neuralgia is to remove any septic foci, however small and unimportant they may appear to be. All diseased teeth and infected bone must be removed and attention paid to impacted third molars or unerrupted teeth. Good X-rays of the mouth are essential

Any sinusitis must be treated and attention paid to the condition of the nasal cavity. The eyes should also be examined and the tonsils should not be overlooked.

Although a few cases of obscure trigeminal neuralgia have been cured by the careful treatment of the oral cavity, yet it is very disappointing what little difference this treatment makes.

If the pain of the paroxysms is not severe, medical treatment may be of some success. The usual analgesics, such as aspirin or phenacetin, are of very little use, even in mild cases. Gelsemium is the best drug, although in many cases it must be

pushed until toxic symptoms appear. Butyl chloral hydrate, alone, or in combination with gelsemium is also very useful.

Morphine in combination with hyoscin should be used with caution, and then only in emergencies, for there is real danger of starting a drug habit if used as a remedy for this disease.

These drugs may keep the pain in check while other treatment is being considered, but they fail if the neuralgia is at all severe.

Electrical treatment, such as high frequency current, corrigation of the face and radiant heat have all been tried, but with little success. Vaccine treatment is still in the experimental stage.

X-ray treatment has proved very successful of late, especially with early cases. The rays are directed on to the gasserian ganglion for a varying number of times according to the severity of the pain and rate of progress. In a series of thirty cases there were nineteen complete cures and only one failed to gain any benefit.

In severe, widespread cases of long standing radical surgical treatment is indicated. This is performed either by neurolysis of the affected nerves with injections of alcohol or by resection of the sensory root of the 5th nerve behind the gasserian ganglion.

The first successful employment of alcohol was made by Schlosser in 1903. He injected 80 per cent. alcohol directly into the branches of the 5th nerve at the various foramina in the skull. The action of this drug when injected into a nerve trunk is to cause a local neurolysis, which is a coagulation of the protein of the nerve fibres at the point of injection, followed by degeneration of the nerve on the peripheral side. The surrounding tissues develop a certain amount of fibrositis, and render subsequent injections more difficult. The effect of an alcohol injection is not permanent, for the nerve will have regenerated after an interval varying from six months to two years, or in a few cases still longer.

A successful injection of the 2nd and 3rd divisions gives total anæsthesia to touch, pin-prick, temperature and pressure over the area supplied by these nerves, together with some motor paralysis of the muscles of mastication on the side so treated.

Injections are very difficult to place and considerable care and experience is required to ensure success, as the point of the needle must actually penetrate into the nerve trunk. Schlosser's original technique was to approach the foramen rotundum or ovale from within the mouth upwards through the pharyngeal roof, but this difficult route has now been abandoned for an external injection through the cheek.

When the nerve trunk has been touched with the needle point the patient flinches. A few drops of 2 per cent. novocain solution is injected, and if after a few minutes the area supplied by the nerve becomes insensitive the syringe is removed from the needle and one charged with alcohol put in its place. The alcohol is injected slowly until the cutaneous area is quite anæsthetic. About 2 ccs. of alcohol is usually sufficient to produce this effect.

It is not advisable to use a general anæsthetic as the patient is unable to report the loss of sensation which occurs when the novocain is injected, and alcohol must never be injected until the cutaneous anæsthesia occurs, otherwise the alcohol may be deposited away from the nerves. If, however, a general anæsthetic is unavoidable, as in a highly nervous patient, a light chloroform and ether mixture is best, just deep enough to keep the patient quiet, but not deep enough to destroy the reflexes when tested with a pin-point.

The only branch of the first division subject to trigeminal neuralgia is the supra-orbital branch, and this can easily be blocked out at the supra-orbital notch.

The injection for the second division may be made at the infra-orbital foramen, and this may give relief in a few cases, but as a rule, the injection must be made further back at the foramen rotundum. This is the deepest and most difficult injection to make.

In brief, the needle is pushed through the cheek near to the anterior border of the coronoid process and passed upwards and inwards through the pterygo-maxillary fissure to a depth of about $2\frac{1}{4}$ inches, where it should strike the nerve as it emerges from the foramen.

In a neuralgia of the mandible, an alcohol injection should be made at the mandibular foramen. If this treatment is unsuccessful, then the foramen ovale must be injected. The path for this injection lies through the cheek at the zygomatic fossa.

Injection of the gasserian ganglion itself is only indicated in those cases where the neuralgia has involved both the second and third divisions, and in the rare cases where the first division is affected also. This is a difficult and dangerous injection, since the needle may be pushed through into the cavernous sinus, or the alcohol injected into the cerebro-spinal fluid, causing a wide-spread paralysis of the cranial nerves.

The method is similar to that of the injection of the third division, only the needle is pushed on through the foramen ovale into the ganglion.

The gasserian ganglion injection gives relief for a year upwards, and results in complete loss of

sensation throughout the trigeminal area. Motor paralysis is complete at first, but improves after a few months.

A gasserectomy, which is the removal of the gasserian ganglion, or its sensory root, as the technique now is, gives the patient a complete and lasting relief, but it is a difficult and dangerous operation, and has a high mortality rate.

The sensory root is cut behind the ganglion and the motor root left intact.

Frazier's method is to reflect a curved flap of scalp and trephine the skull. The hole is enlarged and the dura reflected until the ganglion and its sensory root are exposed. The middle meningeal artery is plugged with wax in the foramen spinosum. The sensory root is then lifted up and cut immediately central to the gasserian gangion.

The after-treatment consists of careful attention to the eyes and oral cavity. Where the first division of the trigeminial nerve is involved, conjunctival irritation arising from loss of sensation of the cornea may easily result unless a shade is worn for a fortnight after the operation. The mouth must be kept very clean to prevent food debris collecting in the sulci.

LITERATURE.

1. Head, H., "Trigeminal Neuralgia," Allbutt's "System of Medicine," vol. vi.
2. Harris, W., "Neuritis and Neuralgia."
3. Rollinson-Whitaker, Ray H., "Concerning Cranial Neuralgia," *Brit. Dent. Journ.* vol. xxx.

The Wills Library Book List

PRESENTATIONS of books have recently been made to the Library by :—

(1). J. Bates, Esq.
(2). Dr. C. P. Blacker.
(3). Dr. J. M. H. Campbell.
(4). C. H. Fagge, Esq.
(5). Sir Wilmot Herringham.
(6). Dr. A. F. Hurst.
(7). W. B. R. Monteith, Esq.
(8). Dr. J. A. Ryle.

The following books have been added to the Library :—

(*Note.*—The number in brackets after an entry refers to the list of donors.)

Ablett. A course in physics.
Allbutt. Notes on the composition of scientific papers, 3rd ed.
Bainbridge and Menzies. Essentials of physiology, 6th ed.
Beaumont and Dodds. Recent advances in medicine, 5th ed.
Buxton. Researches in Polynesia and Melanesia. (3).
Clark. Applied pharmacology, 3rd ed.
Clough. Diseases of the blood.
Davidson and Gulland. Pernicious anæmia.
Dible. Recent advances in bacteriology.
Diseases of Women (Ten teachers), 4th ed.
Dixon. Manual of pharmacology, 7th ed.
Elliotson. On recent improvements in the art of distinguishing the various diseases of the heart. Lumleian Lectures, 1829. (1).
Gray, *ed.* Johnston. Anatomy, 24th ed.
Hey Groves. Synopsis of surgery, 9th ed.
Haggard. Devils, drugs and doctors.
Haslam. Recent advances in preventive medicine.
Herringham. Circumstances in the life and times of William Harvey. Harveian Oration, 1929. (5).
Herman, *ed.* Oldfield. Difficult labour, 7th ed.
Hurst and Stewart. Gastric and duodenal ulcer. (6).
Jellett and Madill. Manual of midwifery, 4th ed.
Johnston. Synopsis of regional anatomy. 2nd ed.
Ker, *ed.* Rundle. Manual of fevers, 3rd ed.
Levine. Coronary thrombosis.
Llewellyn. Gout. (3).
McAsh. Dictionary of dental diseases and treatment.
MacCallum. Text-book of pathology, 4th ed.
MacNevin and Vaughan. Mouth infections, vol. I.
Maclean. Modern views on digestion and gastric disease, 2nd ed.
Massie. Surgical anatomy.
May and Worth. Diseases of the eye 6th ed.
Monteith. Bibliography of Sir James Mackenzie. (7).
Moore. Medical ophthalmology, 2nd ed.
Muir and Ritchie. Manual of bacteriology. 8th ed.
Mummery. After treatment of operations, 5th ed.
Parkes and Kenwood. Hygiene and public health. 8th ed.
Pickerill. Facial surgery. (4).
Pryde. Recent advances in biochemistry, 2nd ed.
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Rea. Affections of the eye in general practice.
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Robert Jones Birthday Volume.
Robertson. Manual of medical jurisprudence and toxicology, 5th ed.
Rolleston. Acute infectious diseases, 2nd ed.
Rood and Webber. Anæsthesia and anæsthetics.
Sheard. Contribution to the study of pernicious anæmia. (3).
Tyson. Medical notes. (2).
Whittaker. Surgery, 4th ed. (2).
Wright. Applied physiology, 3rd ed.

Nursing News

IN drenching tropical rain the Annual Garden Party of the Guy's Hospital Nurses' League was held at the Nurses' Cottage, Honor Oak Park, on Wednesday, June 18th. For the first half-hour after their arrival the guests were able to enjoy the garden, which was really looking very beautiful, in spite of the dark thunderclouds around. Tea tables and deck chairs were arranged invitingly on the lawns and tea was prepared in the tent. A tennis match between the Nursing and Administrative Staffs and other garden games had been arranged, and at 3 o'clock, a band from St. Dunstan's began a musical programme. But alas! by 3.30 p.m. the scene was changed! All the guests fled, carrying their chairs into the Cottage. Only the piano remained outside—and the food in the tent—until the latter was rescued during a slight lull in the storm.

Tea was served by gaslight to cheerful crowds sitting in every available corner in sitting rooms, hall and on the stairs. It was a delicious tea, and nothing seemed to matter except that one was chatting with old friends and trying to make one's voice heard amid the terrific peals of thunder.

Later on, when space permitted, the band came into the large sitting room and their music was much appreciated.

Many guests were present including several members of the Staff, and it is no exaggeration to say that in spite of much difficulty and disappointment it was an enjoyable and memorable afternoon.

Matron and Home Sister deserve much admiration and many thanks for the way they entertained the guests under such trying circumstances.

Correspondence

Death of Dr. Cyril Shepherd

To the Editor of the GAZETTE.

SIR,—I enclose a cutting from the *Sydney Morning Herald* of the 15th May with reference to the death of Dr. Cyril Shepherd, which will be noted with regret by Guy's men of the late nineties.

"Dr. Cyril Shepherd, a leading ophthalmic surgeon, who practised in Macquarie Street for many years, died at his home, No. 3, Marathon Road, Darling Point, at an early hour yesterday morning. He was 55 years of age.

Born at Beverley, in Yorkshire, Dr. Shepherd received valuable training at Guy's Hospital, London. He joined the Royal Navy as staff surgeon, and made two visits to Sydney on the *Royal Arthur* and the *Pioneer*. He was admitted as a Licentiate of the Royal College of Physicians, London, and as a Member of the Royal College of Surgeons, England, in 1898. On his visits to Australia, Dr. Shepherd was much impressed with Sydney, and about 22 years ago he retired from the navy and commenced practice in Macquarie Street.

Dr. Shepherd was president of the Ophthalmological Society of New South Wales, having been elected recently, and was senior ophthalmic surgeon at Sydney Hospital for a number of years. He was a member of the Royal Prince Alfred Yacht Club, the Prince Edward Yacht Club, the Royal Sydney Golf Club, and the Waverley and Rose Bay Bowling Clubs, also a member of the University Club.

Dr. Shepherd married Miss Angel Merivale, who survives him, and there are three children, Messrs. Anthony John Merivale Shepherd, Beverley George Merivale Shepherd and Miss Rosemary Shepherd.

The remains were cremated at Rookwood yesterday afternoon."

I see in the *Directory* the names of Dr. T. B. Walley (Tamworth, Australia) and Dr. J. F. Codrington (Woollahra)—both are dead.

Yours truly,

Wolseley Road, C. R. HODGSON.
Sydney, Australia.

"Anæsthesia"

To the Editor of the GAZETTE.

SIR,—Your remarks on anæsthesia in "Passim" (June 14th) fill me with a feeling of uneasiness and almost of despair, for to express satisfaction with methods of anæsthesia which depend upon the use of toxic and irritant drugs and ignor the pyschology of the patient, is to refuse to recognise the teaching of science, the lessons of the War, and experience of countless surgeons.

My dissatisfaction, Sir, with the present position of anæsthesia is no new-born emotion, no sudden and unreasoning jump into pure science. I am not capable of such violent movements. My feet move but slowly, and upon the ground. But, Sir, a description of myself, by myself, is of no interest to your readers. What may, and should, I venture to think, interest them is a paper by Dr. James Young, in the *Lancet* of May 31st, and a letter by Mr. Basil Hughes in the *Lancet* of June 7th.

I am, Sir, yours faithfully,

FRANCIS E. SHIPWAY.

55, York Terrace, N.W.1.

Reviews

The Modern Surgical Treatment of Pulmonary Tuberculosis. By BERNARD HUDSON, M.A., M.D. (Cantab.), M.R.C.P. (Lond.). Published by Jonathan Cape. *Price 5s.*

THIS book is one of a new series of monographs on Modern Treatment, of which Dr. F. C. Crookshank is the editor. The publishers are to be congratulated on producing a book which is at once neatly bound, handy to hold and moderate of cost.

The author is pre-eminently qualified to discuss his subject, for his experience both in England and in Switzerland, where he is now Medical Superintendent of the Victoria Sanatorium, Davos Platz, has led him to adopt an air of easy authority, and a broad-mindedness which quickly allays all suspicions the reader may originally entertain of a specialist's crankiness.

He discusses the operations of artificial pneumothorax, division of adhesions, thoracoplasty, plombage and phrenectomy, and defines the indications and contra-indications for each, clearly but without dogma. In each case he describes in some detail the actual operative technique, and outlines the after-treatment and results. He resorts to statistics only to emphasise the relative value of each proceedure.

It is interesting to note that he advocates the use of local in preference to general anæsthesia throughout the book, and especially for thoracoplasty.

St. Bartholomew's Hospital Reports. Vol. LXII. Published by John Murray, London, 1929. 258 pages. *Price* £1 1*s.*

THE sixty-second volume of *St. Bartholomew's Hospital Reports* opens with Obituary Notices of three well-known "Bart.'s" men, Sir William Church, Sir Dyce Duckworth and Mr. A. E. Cumberbatch. The first two were two senior Fellows of the Royal College of Physicians of London, the former a past President of the College and one of the founders of the Royal Society of Medicine. Mr. Cumberbatch was "Bart.'s" first Aural Surgeon.

Dr. Geoffrey Evans edits an interesting series of articles on Dietetics, contributed by various authors. The subjects dealt with are Nephritis, Diabetic-Coma, Spastic Constipation, Steatorrhœa, Diseases of Children and Addisonian Anæmia. Nothing very original is forthcoming, but the underlying principles of treatment in each condition are clearly explained and the subject-matter is attractively presented. Record is made of a case of severe diabetic coma, complicated by renal failure and marked concentration of blood occurring in a young adult. Heroic measures were adopted—some 1,200 units of insulin and over 3,000 ccs. of intravenous saline were administered within 48 hours—and were successful in reviving the patient.

Professor Gask discusses the ætiology, frequency and significance of duodenal pouches. He comes to the conclusion that they are not rare as is generally supposed, that they are congenital in origin and rarely, if ever, cause symptoms.

Writing on carcinoma of the rectum, Sir Charles Gordon-Watson is optimistic as to the future of radium in the treatment of this condition. He finds it of most use at present for cases on the border line of operability, and outlines his methods of attack.

Sir Frederick Andrews describes some of the investigations which are being undertaken on the hæmolytic streptococci. The whole subject is extremely complex and no satisfactory classification of these organisms is as yet possible.

Dr. Armstrong enters a strong plea for the consideration of air-borne infection as an important factor in the spread of puerperal sepsis, provides details of several epidemics and makes suggestions as to how they may be limited.

An interesting article on the comparitive physiology of the menstrual cycle and a summary of recent work on the subject is contributed by Dr. Wilfred Shaw.

Drs. Maxwell and Nicholson publish results of an investigation—from the records of the Hospital—into the ætiology and incidence of primary malignant intrathoracic tumours. This most striking finding is the remarkable increase, not only in actual numbers, but in the proportion this class of neoplasm bears to the total number of cases of malignant disease, which has occurred in the last five years. The average percentage before the War was about 4, during the years 1924-28 it was 14, and the total number of cases of malignant diseases had not altered.

Sport

Cricket

Guy's v. Chelmsford

PLAYED at Chelmsford on May 31st, and resulted in a win for Guy's by 100 runs.
Scores—Guy's, 172 ; Chelmsford, 72.

Guy's

S. R. Peatfield, c. Turrell, b. Smith	0
T. D. Ridsdale, c. Turrell, b. Eastwood	12
W. Lewis, l.b.w., b. Warsop	3
W. G. Morgan, c. Young, b. Warsop	71
W. Lewis, c. Jaggs, b. Smith	14
H. Cameron, c. Turrell, b. Eastwood	26
R. V. Payne, c. Rolfe, b. Eastwood	13
J. M. Durr, c. & b. Eastwood	2
J. G. Clarke, st. Eglin, b. Turrell	8
R. M. Outfin, c. Smith, b. Jaggs	0
J. P. O'Shea, not out	6
Extras	17
Total	172

Bowling—J. M. Durr 4 for 26, W. Lewis 1 for 9, J. P. O'Shea 4 for 18, W. G. Morgan 1 for 2.

1st Round Inter-Hospital Cup

Guy's v. St. Thomas's

THIS match was played at Chiswick on the day after the Derby, and, on the day's play, St. Thomas's thoroughly deserved their victory.

Scores—Guy's, 163 ; St. Thomas's, 165 for 8.

Clarke lost the toss, and we were sent in to bat, apparently on the grounds that the wicket was likely to be " funny " for the first hour. As it turned out the wicket played perfectly easy all day, and we lost the match because we did not make enough runs. Our batting was very unsteady all through.

Peatfield and Ridsdale gave us a good start, 41 runs coming very quickly, but then Peatfield was bowled off his pads by a good ball. Guy Morgan joined Ridsdale, and almost immediately Ridsdale got out, caught at the wicket for 24. Walter Lewis failed and 3 wickets were down for 48, a serious situation. Cameron and Morgan took the score to 84, when Morgan was out to another good catch at the wicket. 8 runs later Cameron was bowled, and half the side were out for 92. Windsor Lewis batted well, but was finally tempted into a rash shot, and was bowled in hitting all across a straight one. Clarke and Durr did their best to retrieve the situation by putting on 40 runs for the 8th wicket, but Durr was then l.b.w., and the innings closed soon after for a total of 163, in the circumstances a very poor one.

St. Thomas's started their innings about twenty to three, so that they had plenty of time to get the runs. They scored slowly but steadily, and never looked like losing. Durr and Walter Lewis both bowled really well, but without much luck. Carlyle-Gall, after a shakey start, played a most excellent innings, he was dropped by both Cameron and O'Shea, and was once bowled all over the place by a no-ball from Lewis, but he hit the ball really hard and well, and won the match for his side.

Guy's.

S. R. Peatfield, b. Schilling	15
T. D. Ridsdale, c. Robb, b. Schilling	24
W. G. Morgan, c. Robb, b. Hedley	24
W. Lewis, c. Robb, b. Schilling	0
H. Cameron, b. Marshall	14
W. H. Lewis, b. Schilling	19
R. V. Payne, c. Light, b. Schilling	9
G. J. Clarke, not out	22
J. Durr, l.b.w., b. Marshall	14
R. M. Outfin, c. Schilling, b. Marshall	8
J. P. O'Shea, b. Marshall	0
Extras	14
Total	163

St. Thomas's Hospital.

L. H. B. Light, c. Outfin, b. W. Lewis	29
R. H. Smith, b. Durr	10
C. J. Pearson, b. Durr	1
C. M. Carlyle-Gall, not out	86
L. B. Rouillard, b. W. Lewis	0
A. B. Marshall, c. Ridsdale, b. W. Lewis	15
R. Schilling, c. O'Shea, b. W. Lewis	0
J. V. Hedley, l.b.w., b. Morgan	6
P. A. T. Lowden, b. Morgan	15
Extras	4
Total (for 8 wickets)	165

J. T. Robb and B. F. Winckworth did not bat.

Bowling—Durr 2 for 48, Morgan 2 for 47, O'Shea 0 for 23, W. Lewis 4 for 33. Payne 0 for 9.

Tennis

Inter-Hospital Cup

Guy's v. St. Thomas's

IN the second round of the Inter-Hospital Cup, Guy's beat St. Thomas's on their courts by nine matches to six.

The result of the singles was three matches all. The most interesting game was between Grissen and Conyers. This was played when Guy's had won two matches to St. Thomas's three and was therefore particularly important. Grissen began rather shakily, and when Conyers led at 5-2, it looked as though Guy's would be 4-2 matches down at lunch time. At this critical stage, however, Grissen settled down and begun the good work of catching up. He played mainly from the base line and beat his opponent at his own steady game, winning the set at 7-5. The second set was very even, for Conyers showed no signs of being "rattled" and was won by Grissen at 6-2.

Sidebottom at No. 3 met a very good opponent in Wung Ho. The latter was very quick about the court and his speed at the net frequently enabled him to intercept Sidebottom's passing shots which looked like being winners. Sidebottom was just unable to get the necessary speed, mainly because his forehand drive is essentially a hard court shot, which can only be effectively employed on grass when the courts are very dry.

Mailer appeared to be on the top of his form and beat his opponent, as they say, in all departments of the game.

Bruce Pearson never got into his stride and had one of those days when he could do nothing right. Sharpe had little difficulty in winning when once he decided to come up to the net, and although we only won the first set at 7-5, he was obviously the stronger player throughout. Hollis dissipated an immense amount of energy and was a little unfortunate not to do better.

In the afternoon the "needle" match was between the opposing first pairs. Grissen and Sidebottom did very well to win this in two straight sets. Their return of service was, however, better than their opponents, and their understanding of each others play gave them an additional pull.

Sharpe and Mailer also did well to win their three matches. The good position they kept in court and the "slickness" of their racquet work at the net makes them a difficult combination to beat. The scores were as follows :—

Singles—Bruce Pearson lost to Goldsmith, 6-0, 6-1.
Grissen beat Conyers, 7-5, 6-4.
Sidebottom lost to Wung Ho, 6-4, 6-2.
Mailer beat Johnson, 6-3, 6-2.
Sharpe (E.) beat Edwards, 6-3, 6-2.
Hollis lost to Purvis, 6-4, 6-3.

Doubles—Grissen and Sidebottom beat Goldsmith and Wung Ho, 7-5, 6-3 ; Conyers and Purvis, 6-3, 6-2 ; Taylor Young and Johnson, 6-4, 2-6, 7-5.

Bruce Pearson and Hollis lost to Conyers and Purvis, 7-5, 6-3 ; Taylor Young and Johnson, 6-4, 6-3 ; Goldsmith and Wung Ho, 6-3, 6-4.

Mailer and Sharpe beat Taylor Young and Johnson 6-4, 6-2 ; Goldsmith and Wung Ho, 6-4, 6-4 ; Conyers and Purvis, 6-4, 4-6, 6-2.

Hospital Information, etc.

Notice

British Medical Association Prize Essay, 1931

THE Council of the British Medical Association proposes to award, in March, 1931, a Prize of £25 for the best Essay :—

"Describe and discuss cases illustrating the Modern Methods of the Diagnosis of Early Pulmonary Tuberculosis," by a final-year Medical Student or by a Registered Medical Practitioner of not more than one year's standing (*i.e.*, one year from date of passing of qualifying examination), studying, or who has studied, at one of the following Medical Schools—Guy's Hospital, London Hospital, St. Bartholomew's Hospital, St. Thomas's Hospital.

2. The Prize will be awarded to the Author of the Essay deemed by the Examiners to be the best sent in, but if no Essay received is considered by the Examiners to be deserving of a prize, no prize will be awarded.

3. The Essay, which should not exceed 5,000 words, should be clinical in nature, and *must include concise notes of cases, up to say* 3, *personally observed by its Writer.*

4. Essays should be plainly written or typed on foolscap paper (one side only), and must reach the Medical Secretary, British Medical Association House, Tavistock Square, London, W.C.1, *not later*

than January 12th, 1931. Each Essay *must be signed by a pseudonym only*, and be accompanied by a signed and dated statement that the Essay has been the *bona-fide* work of the competitor, and that he or she comes within the definition of those eligible to enter for the competition ; together with his or her full name, pseudonym, address, Medical School, and (if on Medical Register) month and year in which final examination qualifying for registration was passed.

5. The Essays received will be adjudicated on by Examiners appointed by the Council from among Members of the Association. The decision of the Council will be final.

ALFRED COX,
Medical Secretary.

British Medical Association House,
Tavistock Square, London, W.C.1.

Final Fellowship Course

September to November, 1930.

THE next Course for the Final F.R.C.S. Examination will commence on September 5th, 1930. As the number of members of the Class enrolled is nearing the maximum, Guy's men who wish to join the Course should send in their names to the Medical School Office immediately.

T. B. JOHNSTON,
Dean.

June, 1930.

Pass List

On page 232, L.D.S., R.C.S., First Professional Examination, Part I, instead of J. T. P. Cullingwood read *J. T. P. Cullingford.*

Papers by Guy's Men

A. F. Hurst. Mythical maladies, *Clin. J.*, lix, 277.

E. C. Lowe and H. W. Smith. Clinical efficiency tests, *Liverpool Med.-Chir. J.*, lxxi, 101.

F. E. Shipway. Selection of cases for avertin anæsthesia, *Brit. J. Anæsth.*, 1930, vii, No. 3.

E. G. Slesinger. Observations on diverticulitis, *Lancet*, 1930, i, 1325.

D. S. Sutherland. An outbreak of supposed psittacosis at Ashton-under-Lyne, *Lancet*, 1930, i, 1306.

Change of Address

L. Bromley, F.R.C.S., M.Ch., 36, Queen Anne Street, Cavendish Square, W.1. *Langham* 3126.

E. J. Greenwood, M.B., B.Ch., 14, Star Hill, Rochester, Kent. *Chatham* 2907.

L. Mandel, M.D., 81, Harley Street, W.1. *Welbeck* 6487.

Appointments

A. W. Sheen, C.B.E., M.S., M.D., Deputy-Lieutenant for the County of Glamorgan.
—President of the Hunterian Society.

Guy's Hospital Gazette

(ESTABLISHED 1872)

Published on Alternate Saturdays. Price 9d.

Editorial and Publishing Office :—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, **12s. 6d.** Post Free, payable in advance.

A Journal of Hospital News, Medicine, Surgery and Dentistry.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Birth

McEVEDY—On June 6th, 1930, at the Gables, Chester Road, Stretford, Manchester, to Lillian, wife of Peter McEvedy, F.R.C.S., a son.

Marriage

SHACKLE–BURTON—On Saturday, June 14th, 1930, at St. John's Church, Pendlebury, Manchester, John Walker Shackle, M.A., M.R.C.S., L.R.C.P., to Kathleen Amy Burton, younger daughter of Mr. and Mrs. Joseph Burton of Pendlebury.

EDS. {J. B. B.
P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — 12*th July* 1930 — *Number* 1095

PASSIM

AS a result of the controversy that flickers and flares about the difficult question of *patents* for processes used in the manufacture of therapeutic substances, Messrs F. Hoffmann—La Roche & Co., Basle, have renounced the patent monopoly of their method for the manufacture of thyroxin, a modification of the method of Harrington & Barger, which, in accordance with custom, had not been patented by them. Here we have a generous action on the part of this firm, enabling universal advantage to be taken of this particular advance in synthetic chemistry. Incidentally, in this instance only the improvement, not the original method was worked out by the firm's chemists. Where, however, the whole discovery is the work of men employed by a manufacturing firm, no one would criticise their right to a monopoly—no firm can be expected to be so altruistic as to finance research philanthropically—but when the discovery is the work of men working solely in the interests of science, any attempt to profit by obtaining a patent monopoly is viewed askance; whether this disfavour is just or not has been debated before now. At present, a medical inventor is expected to throw the results of years of patient research as a gift to the world; that he should do so appeals in an abstract way to the British sense of generous self-sacrifice in the interests of combating disease; in the same way a medical practitioner is sometimes expected to give his services without fee; but, whereas in the latter instance, such expectations are held by only a small proportion of the population, in the former this is the more usual point of view. We would not share it, but consider it only fair that a successful inventor in this as other spheres should reap the full harvest of his success. A sound business footing is more likely to stimulate than retard research, for few men are sufficiently well-endowed to work regardless of the extent of remuneration in the event of success.

A VERY pretty ceremony at All Soul's, Langham Place, with a reception at the Langham Hotel, on Friday last, July 4*th*, signalised the marriage of Mr. A. J. MacNair to Miss Grace Buist.

We are happy to think of "Mac," who has endeared himself to us all in his work in the Hospital, and during the many years he has resided in the Warden's House, entering this new phase of his career.

We wish him and his wife all happiness and a welcome back on their return from their honeymoon.

WE have the pleasant opportunity of printing on another page a photograph of Miss Emily MacManus, returning from Buckingham Palace after receiving from the King the honour awarded her in the Birthday Honours List.

IT was with satisfaction that we noted a few days ago that the heliotherapeutic season has started at Guy's—though the day chosen for its rather timid and furtive inauguration was unfortunate, for on the one day on which the sun had forgotten to shine for the last three weeks, we beheld a small child, aged 5, squatting miserably on the grass in the Park, endeavouring vainly to warm its shivering naked body by hugging itself cabby-fashion. Let not the authority by whose order this pathetic picture was caused be disheartened, however; the sun is bound to reappear and the idea is thoroughly sound.

We have recently been told that too much sun-bathing is bad, but we incline to agree with the authority on heliotherapy who said that England is the finest country in the world for sun-curing, because there is never too much sun—nor do we suspect a cynical element in this aphorism, for who could suspect a heliotherapist of cynicism? Perennially we notice half-hearted attempts to follow out the prescription here at Guy's, and we can only hope that the treatment, which at least has the merit of costing the Hospital nothing, may become more universal during the summer months this year. Every week-end finds the Theatre balcony groaning under the weight of bare-chested deck-chaired College dwellers, sun-bathing to the best of their ability "in this salubrious Borough." Why should we deny our patients the same easily obtained benefits? Is it, as we fear, because the minds of some of us run too much in a groove?

We are asked by the manager of the *Gazette* to bring to the notice of subscribers, more especially those abroad, that a large amount of correspondence is received each week with postage underpaid; this entails a great deal of unnecessary annoyance to him and his staff, and we respectfully hope that an improvement in this direction will take place in the future.

We congratulate the following on being appointed Clinicals for the period July 16th to October 16th:

Mr. O. Ive
Mr. N. S. Plummer
Mr. T. B. Pitts
Mr. F. H. Stevenson
Mr. C. P. B. Whitwell
Mr. B. Southwell

Obstruction of the Ureter

A Clinical Lecture delivered at Guy's Hospital by R. P. Rowlands, Esq., O.B.E., M.S.

GENTLEMEN,—Obstructions of the ureter may be—

1. Inside;
2. Outside; or
3. In the wall of the ureter.

1. *Inside*—The ureteral canal, which is only 5 mm. wide, is often blocked by stone, blood clot, inspissated pus or debris, especially from a tuberculous kidney, detached pieces of growth, papilloma of the ureter, small hydatid cysts or actual foreign bodies.

2. *Outside.*—Abnormal renal vessels[1] generally extending from the main renal vessels to the lower pole of the kidney often cause intermittent obstruction of the ureter; they cross and hitch up the ureter, especially when the kidney is too mobile and fall when the patient stands up. Hæmatoma or abscess in the loin or in the lower pole of the kidney may also cause intermittent obstruction. Tumours of the uterus, prostate, colon, rectum or skeleton, may press upon the ureter and obstruct it. Sometimes the ureter has been ligatured during operation. A spasmodic contraction of the bladder due to cystitis or stone may obstruct the lower end of the ureter; papilloma or carcinoma of the bladder at or near the ureteral orifice often does the same.

3. *In the wall of the ureter.*—Diseases and injuries of the wall of the ureter may narrow or obstruct its lumen, *e.g.*, stricture, which may be—

1. Congenital.
2. Traumatic or post-operative.
3. Inflammatory.
4. Tuberculous.
5. Parasitic due to Bilharzia or malignant disease.
6. Valve ureter.

A valve[2] is often found at the junction of the ureter and the renal pelvis and it is probable that a congenital constriction at this spot is the primary condition. As the pelvis of the kidney dilates from partial obstruction, a valve or kink forms and causes more and more obstruction. Congenital valves may occur or folds of the mucosa may form at any part of the ureter. (See figs. 534 and 535, Young's *Practice of Urology*, v. ii, p. 49.)

The results of obstruction of the ureter are dilatation of the ureter and pelvis behind the obstruction, with hydronephrosis and atrophy of the renal substance; a stone often forms above the obstruction. Infection may ensue sooner or later, causing chronic or acute pyelonephrosis or pyonephrosis and perhaps a perinephric abscess.

SYMPTOMS OF OBSTRUCTION OF THE URETER.

1. *Pain in the loin,* and usually along the ureter to the testicle, groin or thigh, but it may be limited to the flank. This pain may be intermittent and very severe and is well known as renal colic.

2. *Abnormal urine.*—Albumen, blood, crystals, pus or bacteria may appear in the urine if the obstruction is incomplete, but the urine may be normal when the obstruction is complete.

3. *Swelling.*—The kidney may enlarge and be palpable, due to nephritis, hydronephrosis or pyonephrosis.

Diagnosis.—Much depends upon the physical examination of the abdomen and loins and upon the chemical and microscopical examination of the urine. Radiographic examination may reveal a calculus in the pelvis of the kidney or in the ureter. Calcified glands and phleboliths in the pelvic veins have often been mistaken for urinary calculi. Cystoscopy, with the aid of the intravenous injection of indigo carmine, may show that no coloured urine issues from one ureter. The ureteral catheter may reveal the presence and the site of obstruction and a pyelogram may show dilatation of the pelvis and indicate the probable cause of this. In some cases, however, the diagnosis cannot be completed without exploration of the loin, for a small stone may not be revealed by the most careful radiographic examination.

Treatment.—Unless there is some definite indication of the exact site of the obstruction, it is as a rule wise to explore the kidney and the upper part of the ureter through the loin. Thus the obstruction can be discovered and removed in the majority of cases and the kidney can be carefully examined. Whenever possible, the obstruction must be removed and the kidney saved, nephrectomy being reserved for cases where the kidney is beyond hope of recovery, and the other kidney is known to be healthy and doing good work.

The three following cases are examples of rather unusual causes of obstruction of the ureter.

Case 1.

Congenital Stricture of the lower end of the ureter, with ballooning into the bladder. Hydronephrosis; ureterolithotomy; nephrectomy.

G.M., aged 11, was admitted to Guy's Hospital on 18th November, 1922, for pain on micturition, and severe pain in the left loin, with fever and ammoniacal urine.

His medical attendant had given him medicine which had relieved the pain on micturition, but a week later, left renal colic with fever developed and the boy was sent to the Hospital. His father had been at Guy's under my care for papilloma and stone in the bladder some seven years earlier.

Upon admission, there was no renal swelling, but some tenderness over the left kidney and left ureter. There was much pus in the alkaline urine. Radiographic examination showed a stone on the left side of the pelvis, reported to be in the bladder; there were also opacities in the right renal region. Cystoscopy showed no stone in the bladder, but a large balloon-like swelling at the site of the left ureteral orifice, from which no urine or indigo carmine issued. The ureteral orifice was hidden by the swelling. Persistent vomiting and other uræmic symptoms followed. The blood urea was twice the normal. A second radiographic examination was made and the stone was seen still on the left side of the pelvis, but now judged to be in the lower end of the left ureter.

4th December, 1922. Ureterotomy was performed after displacing inwards the left rectus and peritoneum. The ureter was as large as the colon; it was opened low down and was found full of pus. An impacted stone, one-third of an inch in diameter was removed and a large probe easily passed into the bladder.

20th December, 1922. The patient was discharged, having made a good recovery.

23rd March, 1923. He was readmitted for investigation. No stone was revealed by X-rays in the right renal pelvis or elsewhere.

In January, 1928, he came to Medical Out-patients for renal colic. The X-rays showed no stone. The examination was repeated at Surgical Out-patients in February, 1928, and at St. Thomas's Hospital in 1928, but no stone was shown.

22nd October, 1928. He was readmitted into Guy's; radiography for stone was negative. Cystoscopy confirmed the former findings as regards the bladder and the left ureteral orifice, which was hidden by a large balloon-like swelling. No urine or indigo carmine issued from the left ureter in 20 minutes, whereas it came freely from the right ureter after 7 minutes. The blood urea was $1\frac{1}{2}$ normal, but there was no lack of concentration of urea in the urine.

5th December, 1928. Nephrectomy. There was a very large hydronephrosis. The renal cortex was very thin and the epithelium of the calyces was thickened. There were no stones found anywhere, but the ureter was greatly dilated right down to the bladder.

Comments.—It is noteworthy that the symptoms in this case, which were due to the impaction of a stone near the lower end of the left ureter, closely resembled those of cystitis and stone of the bladder. The radiographic report confirmed the error which cystoscopy, however, soon corrected. The cystoscopic appearances were remarkable, showing a cystic, balloon-like projection into the bladder at the site of the left ureteral orifice.

These appearances are characteristic of congenital stricture of the ureter with dilatation of the submucous part of the ureter. Blumer[3] published a case in which this rare condition was bilateral; in the 13 cases which he was able to collect the proof of congenital origin of a condition was nearly complete. Later, similar cases were published by Young[4] and by Kelly[5]. It is interesting that in

Kelly's case the condition was corrected by enlarging the ureteral orifice. My case was apparently too late for cure in this manner, the kidney being already hydronephrotic and infected. It was remarkable, however, that the symptoms were more or less quiescent for six years after the removal of the stone from the left ureter.

CASE 2.

Traumatic Stricture of the Left Ureter. Hydronephrosis. Operation. Recovery.

Mrs. S., aged 35, had a motor accident on December 6th, 1927, and fractured the left femur and severely injured the left hypochondrium at the same time. She has had pain in the left flank ever since. From February, 1928, she has had severe attacks of colic in the left loin at irregular intervals, roughly about every three weeks. The attacks are typical of left renal colic running down the flank to the left groin.

On July 7th, 1928, she was admitted to Guy's Hospital under my care, and was said to have passed a stone three weeks earlier, after suffering for three weeks from pain in the left flank; the stone was said to have been the size of an olive. She had been X-rayed the day before, and a stone had been shown in the lower part of the left ureter and another one higher up near the kidney. Upon admission, the urine was alkaline and contained some albumen and pus. Radiographic examination was negative.

On the 17th July, 1928, cystoscopy showed some cystitis, but a catheter passed up the left ureter quite easily, and both kidneys were excreting urine freely, therefore an operation was considered unnecessary and the patient was sent home. However, the same night she again developed a severe left renal colic, requiring morphia, and a small stone was passed next day.

On August 13th, 1928, she was readmitted. The urine was acid and contained B.C.C., pus and blood. A pyelogram by Mr. Lloyd showed dilatation of the left renal pelvis. No tubercle bacilli were found in a catheter specimen taken from the left ureter.

She was readmitted again on November 5th. Cystoscopy, with the aid of indigo carmine injected intravenously showed that the right kidney excreted in three minutes, whereas the left kidney only excreted after 15 minutes.

At the operation, the left kidney was found to be enlarged and adherent, with its pelvis dilated and distended. There was a mass of fibrous tissue, probably an organising hæmatoma, found behind and below the lower part of the kidney, constricting the ureter just below the pelvis. Organising clot was removed from the dilated pelvis, and the external constricting mass of fibrous tissue was dissected away, leaving a good passage, along which a catheter was easily passed into the bladder.

Comments.—In this interesting and difficult case, the sequence of events appears to have been as follows:—At the time of the accident, the left kidney was injured and blood was exuded into the pelvis of the kidney and into the loin round the ureter. Fibrosis of this hæmatoma led to compression of the ureter just below the pelvis. The clot within the pelvis became infected and lime salts were freely deposited upon the clots and gave the radiographic shadows indicating stone. Pyelography was of the greatest value in this case, because it indicated dilatation of the renal pelvis due to mechanical obstruction of the ureter, and that an operation was necessary. The removal of the fibrous tissues which compressed the ureter and the clots from within the pelvis proved satisfactory and a useful kidney was saved.

CASE 3.

Hydronephrosis of the Right Kidney. Abnormal Vessels obstructing the Ureter.

F. W. C., a man aged 29, was admitted to Guy's Hospital on January 4th, 1927, suffering from pain in the right lumbar region.

In August, 1926, he had an acute attack of pain in his right loin; it lasted about five hours and was especially bad when he walked about. There was no vomiting or nausea; micturition was normal. For the following six weeks he was quite free from pain. At the end of September he had another severe attack over the same area; it lasted on and off for three weeks. For the first five days he vomited a good deal. He described the pain as very acute, commencing in the back, just below the ribs on the right side, and extending to the front of the abdomen along the lower costal margin. From here it passed down into the right iliac region and then into the scrotum. The right testis became painful. An X-ray examination of the lumbar region was negative. In November he had another similar attack; it lasted fifteen days and he vomited a good deal, but had no pain on micturition; no blood was noticed in the urine. There was a recurrence on December 16th, lasting nine days; the pain was continuous and for the first few days he vomited almost every half hour.

He has suffered from constipation for the last four months, though previous to this the bowels had been regular. During, and for a short time after, his later attacks his urine was dark in colour. He noticed that the attacks came on after a hard day's work, especially if he had had little to eat.

Condition on admission.—Very tender and slight swelling of the right kidney. Patient complains

of a dragging sensation in his right loin if he stoops and leans to the left.

X-ray Report: doubtful opacity in right side of the pelvis over the lower end of the ureter.

8th January, 1927. Cystoscopic examination. Indigo carmine could be seen issuing from the left ureter, but none came from the right even after seventeen minutes.

The diagnosis remained doubtful as between stone in the ureter, valve ureter and compression of the ureter by an abnormal artery or vein.

Operation.—10th January, 1927. There was complete obstruction of the right ureter by an artery and a vein, hooking in front of the ureter and stretching from the renal vessels to the lower pole of the kidney. There was a large hydro-nephrosis of the kidney, which had been considerably stretched and damaged and was unusually adherent. It was, however, worth saving, and after dividing the abnormal vessels and the secondary adhesions around the junction of the pelvis and the ureter, the passage became quite clear and was of sufficient size. Therefore, no anastomosis was made between the ureter and the pelvis. The patient made a good recovery and has remained well ever since.

Comments.—Abnormal vessels travelling to the lower pole of the kidney frequently obstruct the ureter. I have now operated upon over 30 cases; in all but two instances the kidney has been saved.

Dividing the abnormal vessels[4] has sufficed in the majority, but in a third of the cases it has been necessary also to anastomose the dilated pelvis to the ureter. Undue mobility and descent of the kidney aggravate the obstruction and play an important part; therefore nephropexy helps to cure.

In conclusion.—I cannot lay too much stress upon (1) the importance of relieving obstruction of the ureter without delay, so that the kidney may be saved; (2) the saving of any kidney that appears capable of recovering even a part of its function, because a person with only one kidney is in a precarious position, and is likely to lose his life from suppression and uræmia if anything serious happens to the remaining kidney. It is noteworthy that obstruction caused by abnormal blood vessels may be bilateral, as shown by the specimens placed in our museum by the late Dr. Newton Pitt.

One of my patients lost his life when his second kidney became obstructed 30 years after the first had been removed for a large hydronephrosis; in each case the obstruction was caused by abnormal vessels hooking the ureter.

REFERENCES.

1. *Brit. Med. Jour.*, 1917, I, 755, and Guy's Hospital Reports, 1922, lxxii, 315.
2. Henry Morris. Surgical Diseases of the Kidney and Ureter, v. ii, p. 423.
3. Blumer. Notes on Two Cases of Ureteral Abnormality, Johns Hopkins Hospital Bull., 1896, vii, 174-176.
4. Young. Practice of Urology, ii, 45.
5. Kelly. Idem.

Cases from Take-In—I.

CASE I.

A case illustrating some of the possible Post-operative Complications of Acute Appendicitis.

A MAN, aged 32, was taken ill with abdominal pain one Saturday afternoon while at work. He went straight home, where he was fortunate enough to receive the immediate attention of his medical practitioner, who was looking after his wife during her confinement. The patient vomited shortly after his return home, and was seen again by his doctor later the same evening. The doctor saw him twice on the Sunday, and on Monday morning sent him up to Guy's to be kept under observation.

On admission, the patient was found to have vomited several times since the onset of his pain, to be locally rigid in the right iliac fossa, to have a temperature of 100.8, and a pulse rate of 98. The pain had been considerably easier since the previous afternoon.

At operation, the appendix was found to be gangrenous, with a small perforation near the tip. Pus was mopped out from the surrounding area, and flavine poured into the wound, which was drained. Three days after the operation the patient developed considerable upper abdominal distension, and began copiously to vomit spinach-coloured fluid. Pituitrin followed by an enema produced a good result, and *acute dilatation of the stomach* was diagnosed and treated by repeated gastric lavage. The patient was given anti-gas-gangrene serum and cut off everything by mouth, and eventually put on a Sprengel's pump. After three days of anxiety the patient's condition improved. A week after the administration of the serum the patient became considerably discomforted by a *serum rash.* Four days later the patent developed a *fæcal fistula,* but insisted on maintaining a cheerful disposition, until four weeks after the operation, when he suddenly developed an acute attack of dyspnœa, accompanied by severe retro-sternal pain, and heralded by a rigor. A *pulmonary embolus* was diagnosed and morphia was administered. The patient vomited and a temperature of 103-101 was maintained for 24

The Matron returning from Buckingham Palace after being Honoured by the King

hours. Dr. Douthwaite was called in to see the patient and confirmed the diagnosis.

The patient recovered and is now convalescing. It is hoped that he may develop no further complications.

CASE II.

Intestinal obstruction due to a stump of ileum constituting a band.

The patient was a man aged 59, who, 17 years ago was operated on in this Hospital for a perforated duodenal ulcer. At the operation an ileal kink was noted, and the patient subsequently underwent another operation, at which an ileo-sigmoidostomy was performed to guard against any possible effects of the ileal kink. About six inches of blind ileum were left distal to the anastomosis, and the patient was admitted now with the symptoms of an acute, small gut obstruction—copious vomiting, becoming fæculent; considerable abdominal distension, mainly central in distribution with shifting dullness in the flanks; and a small result with an initial, but none with subsequent enemata.

On admision the temperature was 99, the pulse 120, and the respirations 20. An operation was performed 48 hours after the onset of symptoms under spinal anæsthesia. The symptoms were found to be caused by an obstruction of coils of small gut by a band constituted by the blind lower end of the ileum left over from the previous operation. The condition was relieved and a rectal tube was passed into the ileum through the ileo-sigmoidostomy and kept in place by a stitch through the anal margin. 40 c.c. of anti-gas-gangrene serum were administered.

Three days after the operation the patient developed signs of massive collapse of the lower lobe of his right lung. After two more days, the bronchial breathing, etc., had disappeared and given place to moist sounds at both bases, especially the right. Subsequently the patient began to show signs of a secondary uræmia with mental symptoms, suppression of urine, brown, dry tongue, foul breath and diarrhœa. He had to be removed to the Strong Room, where his already impaired general condition fought a losing battle with his renal and respiratory failure. At autopsy he was found to have a broncho-pneumonia.

CASE III.

Intestinal obstruction due to Carcinoma of the Pelvic Colon.

A woman, aged 65, had been complaining of increasing constipation and swelling of the abdomen for a month. During the week preceding admission she had been unable to empty her bowels at all, in spite of many aperients.

On the day of admission she had vomited, and an enema the previous evening had produced no result. On examination, the tongue was furred, the temperature was 98 and the pulse 80. There was no visible peristalsis, but there was fullness in both flanks, without shifting dullness. No tumour was palpable, but a protuberance in the right iliac fossa was thought to denote the position of a distended cæcum, and the shape of a dilated descending colon was indicated by a fullness in the left iliac region. On examination, the rectum was found to be ballooned. A gridiron incision was made and a cæcostomy performed.

The cause of the obstruction was found to be a freely movable, diabolo-shaped growth constricting the lower end of the descending colon. No secondary growths could be felt. A fortnight after this operation the growth was resected locally, and an end-to-end anastomosis performed. On opening the piece of resected gut, the growth was found, by its encroachment on the lumen of the bowel, to be easily responsible for the complete obstruction denoted by the symptoms previous to admission. The prognosis is very good.

CASE IV.

Cholelithiasis simulating intestinal obstruction.

An old man, aged 84, awoke three days before admission to Hospital, with a severe pain in the right side of his abdomen, accompanied by nausea and retching. The pains persisted, and his habitual relative constipation became absolute.

On admission, his abdomen was found to be distended, especially in the right flank, suggesting distension of the cæcum and ascending colon. There was definite fullness in the right hypochondrium, and some could feel a lump. He had been vomiting and enemata produced no result. The temperature was 98, the pulse 62, and the tongue dry and furred.

The case was diagnosed as intestinal obstruction, due to a carcinoma of the hepatic flexure, and the abdomen was opened. Under the anæsthetic a lump could definitely be felt in the right hypochondrium, but this proved to be a distended gall-bladder, containing inspissated bile and mucus, with a large gall-stone impacted in the neck of the gall-bladder. The cæcum and ascending colon were found to be paralytically distended, but no local cause for this could be discovered. The stone was removed and the gall-bladder drained. The patient is doing very well and likes beer.

CASE V.

Perinephric Abscess as a manifestation of Staphylococcal Septicæmia.

Four weeks before admission, a woman of 29 developed a crop of boils on the back of her neck. A week later she complained of pain and effusion in her right shoulder and ankle. After another week she developed a right-sided pleurisy with temperature, swelling and pain in the right loin. A swinging pyrexia persisted, and the fullness and tenderness in the right loin became more marked and did not yield to relief by antiphlogistine.

On admission the patient looked very ill, with a dry furred tongue and a temperature of 101, and a pulse of 100. A large perinephric abscess was opened and a heavy growth of staphylococcus aureus was cultured from the pus. The patient developed a crop of small boils round the wound, and has alarmed both herself and us by hatching another boil on her neck. This is, however, receiving vigorous attention, and it is hoped that she may have an uninterrupted recovery.

CASE VI.

Acute Epididymo-orchitis due to the Bacillus Coli.

An acrobatic dancer, aged 34, noticed that his left testicle was red and swollen a week before admission. The swelling increased until the day of admission when the testicle became acutely painful and the patient vomited. There was no history of an urethral discharge, nor was the meatus either red or pouting. Gonococci could not be detected in the secretion obtained by prostatic massage. There was no loss of weight or appetite, nor had there been any cough or sputum. A catheter specimen of urine showed no tubercle bacilli, and an X-ray of the chest gave no evidence of phthisis. There was no history of injury and the Wassermann reaction was negative.

On examination, the testicle and epididymis were very swollen, red and tender. The swelling of the epididymis and cord was especially prominent, though the testicle was adherent to the scrotum in front, and there was no "beading" of the cord. There was no tenderness in the loin and the kidney was not palpable. There were no signs in the chest. The temperature was 102 and the pulse 115. The bacillus coli was found in the urine.

The condition was watched for a fortnight, but though the pain disappeared, the swelling did not decrease appreciably in size, and fluctuation was obtained on the anterior aspect. An orchidectomy was therefore performed, and the pus from the tunica vaginalis on culture showed the presence of the bacillus coli.

I am indebted to Mr. Rowlands for permission to report these cases.

P. M. F. B.

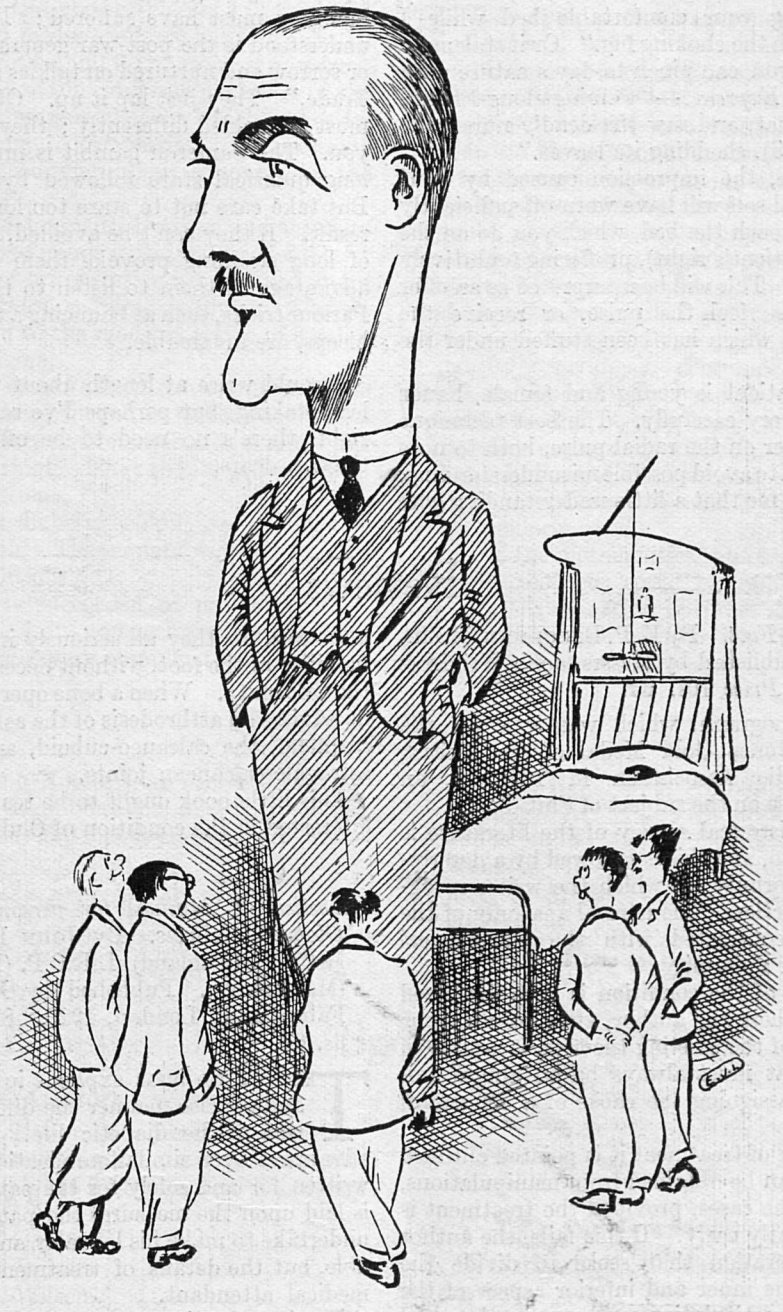
That Bedside Manner

GUY'S really needs a school of deportment for G.P.'s. The only difficulty would be the embarrassing choice of a professor from the ranks of our junior and more scintillating physicians. In general practice manner makyth man. Of course, you must cut your coat according to your cloth. If it runs to a frock coat you may attempt the grand manner, complete with solemn entry, production of stethoscope from topper, use of the regal first person plural—but no, even a frock coat won't excuse "and how are we to-day?" Myself, I touch the other extreme, but humility, too, can be overdone, and the door may close in your face with a "not to-day, thank you."

Also, humility invites the patient to aggression. You know:—"I took your beastly powder, but I didn't sleep a wink. I'm much worse. Don't tell me not to take cocktails, I know what suits me. Well, don't hesitate to get another opinion if you don't understand my case." No, defence won't do—attack, overwhelm, disagree all the time. There is a foolish saying that only rich men can afford to dress badly, and an equally foolish impression that only great doctors can afford to be disagreeable. Do you know the technique? Well, first catch your hare; in other words, don't say "don't take eggs," but "do you take eggs?" Then, if the answer is no, you counter with "Well, try six a day for a start," but if the answer is yes, you draw in a deep breath and bellow "Eggs-poison-to-you-my-dear-sir, eggs above all things! Every egg you take is a nail in your coffin, a stone in your gall-bladder, a new car in your surgeon's garage." The same procedure may be applied to whisky, ice-cream, bed-socks and other things.

The degree of heartiness with which you enter a bedroom must be carefully modulated to the case. The stygian gloom is best kept for coma; on the other hand, don't dash in, rubbing your hands, garlanded in grins, saying "Ah-ha, chaps, here we are again," like a Pres. Res. at a going-off dinner. Just be your pleasant, natural self, old boy. At any rate keep it up for a minute till you see if it goes down. If it stays up you must just make conversation. The weather is a conventional opening,

"MONUMENTS OF MEDICINE '—I.



J. A. R.—From Lesser Heights

but there is scope for variation even in a subject as old as Noah. The proprietorial gambit :—" Just look at our glorious weather, our great-heritage-wide - open - spaces - wind - on - the - heath - that's-my-prescription." Or the more tactful :—" Lucky fellow, enjoying your comfortable bed while I struggle through the choking fog." Or if stalemate is threatened you can pinch to-day's nature note from the *Daily Express* —" Coming along I heard the first chit-chat, and saw the deadly nursebane (liber Ashdownii), shedding its leaves."

By this time, the impression caused by your pleasant natural self will have worn off sufficiently for you to approach the bed, which you do on the left side (the patient's right), proffering tentatively the right hand. This will be interpreted as an offer to shake hands, feel the pulse, or receive the *Sporting Times* which has been stuffed under the pillow.

When the patient is young and female, hands must be held very carefully. The best technique demands a finger on the radial pulse, both to note the reaction and to avoid possible misunderstanding. Which reminds me that a little understanding goes a long way. With colonels and dowagers take the line " Ah, I know, I know ; the young folk don't realise what you suffer ; they live in a world where pain, sympathy and decency are alike unknown." With the younger set :—" Ah, you're sensitive—how you must have suffered ; I know how misunderstood is the post-war generation, born in sin or sorrow and nurtured on talkies and Empire Free Trade." They just lap it up. Of course, children must be tackled differently ; they can see through you. The Cameron gambit is much admired ; a long quizzical stare followed by " nice child ? " But take care not to stare too long, or tears may result. If they can't be avoided, and even fathers of long standing provoke them sometimes, take advantage of them to listen to the voice sounds. Parlour tricks, such as bouncing a tennis ball off the biceps, are invaluable.

I could write at length about the technique of leave-taking, but perhaps I've said enough ? All right, there's no need to be offensive about it. Cheero, dears.

S. A.

Reviews

Congenital Club-Foot. By E. P. Brockman, M.Ch., F.R.C.S. Published by Messrs. John Wright & Sons, Ltd. *Price* 10*s.* 6*d.*

THIS monograph, which was awarded the Robert Jones Gold Medal of the British Orthopædic Association in 1928, is an excellent treatise on the subject of Club-Foot.

A detailed historical survey of the literature is first entered into, and this is followed by a description of the deformity, of which the writer recognises three varieties. The normal anatomy of the foot is then contrasted with the pathological anatomy of the deformity.

The etiology of the condition is then discussed at length, and here the author, after pointing out the deficiency of the existing theories, is unable to help us in what must always be an almost impossible task, assigning the cause of a congenital abnormality.

In the matter of treatment it is pointed out how much benefit can be obtained from manipulations, in about half the cases, provided the treatment is started sufficiently early. If this fails, the author advises an operation that seeks to divide the ligaments on the inner and inferior aspect of the sub-astragaloid articulation, and quotes the good results in his hands of this operation.

Bone operations, he says, are to be reserved for the cases that have failed to respond to these measures, for they all seriously interfere with the mobility of the foot, without necessarily correcting the deformity. When a bone operation is essential, he advises an arthrodesis of the astragalo-calcaneo-scaphoid, the calcaneo-cuboid, and the posterior astragalo-calcanean joints.

This little book ought to be read by all who are interested in the condition of Club-Foot.

N. L. E.

Diabetics—A Manual for persons suffering from Diabetes Mellitus. By John Knowles Lund, M.R.C.S. (England), L.R.C.P. (London), D.P.H. (Manchester). Published by Messrs. Faber & Faber, Ltd., London, 1929. 871 pages. *Price* 3*s.* 6*d.*

THIS little book explains in simple language and concise manner the difficulties and dangers of the diabetic life. It possesses an advantage over similar publications, in that it is written for and solely for the patient. Emphasis is laid upon the measures the patient himself can undertake to make his lot safer and more comfortable, but the details of treatment are left to the medical attendant.

The introduction summarises the advantages of insulin treatment and points out the great improvement that has taken place in the expectation of life for the diabetic since Banting's discovery in 1922,

and the higher standard of living that is now possible.

Following a short description of the pathological changes associated with diabetes and enumeration of its chief signs and symptoms, the author proceeds to describe in simple terms the principles of diet in this disease and the various classes of foodstuffs. Some useful food tables are included in which the carbohydrate, protein and fat content of numerous articles are expressed in *grammes per ounce* of the food in question, an arrangement which makes for ease and simplicity in calculation. An elaborate "ladder diet" occupying about a quarter of the book is added.

The sections dealing with Hygiene and the rules for the avoidance of minor sepsis are excellent.

The methods of urine testing are detailed and a list of the apparatus required is given. A short section is devoted to the mode of action of insulin, its uses and dangers.

The technique of self-administration of insulin is very carefully described and valuable suggestions are made for the care and maintenance of antisepsis of needles and syringe. They should prove helpful to the average patient.

A few hints on diabetic cooking are included at the end of the book. These might well be amplified in subsequent editions.

The author has succeeded in presenting in a readable form and in non-technical language a concise account of a very complicated disease.

It can be recommended to patients on these grounds.

A Text-Book of Hygiene. By J. R. CURRIE, M.A. Oxon., M.D. Glas., D.P.H. Birm., M.A., M.R.C.P. Edin. Published by Messrs E. & S. Livingstone. *Price* 27*s.*

THIS book is much as other Text-books of Hygiene, but at the moment has the advantage of being up to date, as it contains abstracts of Public Health Law up to the end of 1929. Both Scottish and English Laws are included, but the marginal headings make it quite easy for the reader to avoid the alien matter.

The type is better than usual and the style readable, at times even approaching exaltation. How often in such a book is our æsthetic sense pampered by such phrases as "under the sky the wind blows in gusts, the long grass undulating in waves to the breeze." The matter is unusually and thoughtfully arranged. The law abstracts are placed at the end of the book. This facilitates learning although it may handicap revision.

The chapters dealing with Maternity and Child Welfare, Industrial Hygiene and the summary of modern conceptions of immunity and epidemiology are particularly good.

Most of the mathematical processes contained in statistical methods could be omitted. They are useless for examination purposes and such a book can have but little other function. The illustrations are numerous and well chosen. L.W.C.

Nursing News

THE following Nurses were successful at the May Final Examinations, and their names have been entered on the General part of the State Register :—

Barbin, M.
Barraclough, E.
Clarke, E. A.
Edgerley, I.
Gough, L. M.
Hodgkinson, A.
Irvine, M.
Jackson, D.
Jenkins, K.
Jennings, K.
Johnston, A.
Kimpton, K.
Merson, A. B.
Michael, I.
Reilly, C. B.
Stainforth, H.
Stokes, D.
Sumpter, V.
Taylor, M.
Telford, M.
Thomas, E.
Townend, M.
Watson, P.

Sport

Guy's v. Catford Wanderers

PLAYED at Honor Oak Park, on Saturday, June 7th, and resulted in a drawn game. *Scores*—Guy's 116 for 6 ; Catford Wanderers 200 for 5.

Guy's.

T. D. Ridsdale, b. Wilson	4
S. R. Peatfield, b. Wilson	0
W. Lewis, c. Wilson, b. Miller	6
J. A. G. Starnes, not out	55
H. Cameron, b. Wilson	14
R. V. Payne, b. Simpson	4
W. D. G. Jones, b. Lee	12
J. Durr, not out	8
Extras	13
Total (for six wickets)	116

R. M. Outfin, S. M. Witteridge and J. P. O'Shea did not bat.

Bowling—Durr 3 for 60, W. Lewis 1 for 39, Payne 0 for 24, O'Shea 0 for 27 and Witteridge 1 for 41.

Guy's v. Crofton Park

PLAYED at Honor Oak Park on Whit Monday and resulted in a win for Guy's by 4 wickets.

Scores—Guy's 204 for 6; Crofton Park 196.

Guy's.

T. D. Ridsdale, c. Gooding, b. O'Sullivan	10
H. Cameron, run out	66
W. Lewis, st. Jenkinson, b. Sharpe	10
J. A. G. Starnes, not out	71
J. Durr, c. & b. O'Sullivan	0
G. J. Clarke, st. Jenkinson, b. Hall	19
E. V. B. Widdowson, not out	0
R. M. Outfin, b. O'Sullivan	16
Extras	12
Total (for 6 wickets)	204

J. P. O'Shea, L. M. Witteridge and G. Ellison did not bat.

Bowling—W. Lewis 3 for 53, Durr 3 for 62, Witteridge 0 for 25, O'Shea 1 for 39 and Clarke 2 for 9.

Guy's v. Catford Wanderers

PLAYED at Catford on Wednesday, June 11th, resulting in a win for Guy's by 77 runs.

Scores—Guy's, 181; Catford Wanderers, 104.

Guy's.

T. D. Ridsdale, l.b.w., b. Miller	5
S. R. Peatfield, b. Martin	2
W. Lewis, c. Baker, b. Martin	20
J. A. G. Starnes, c. Miller, b. Martin	6
H. Cameron, b. Martin	5
W. H. Lewis, c. Skelsey, b. Brocker	37
R. V. Payne, b. Barnes	29
J. Durr, c. Skelsey, b. Brocker	22
S. M. Witteridge, not out	8
R. M. Outfin, b. Holmes	42
J. P. O'Shea, b. Holmes	4
Extras	1
Total	181

Bowling—Durr 3 for 39, W. Lewis 3 for 37, O'Shea 1 for 18, Witteridge 2 for 6.

Hospital Information, etc.

Pass List

ROYAL COLLEGE OF SURGEONS OF ENGLAND.
FINAL EXAMINATION FOR FELLOWSHIP.
May and June, 1930.

A. C. Copley.
J. R. Ratcliffe.

L.D.S. FINAL EXAMINATION.
June, 1930.
PART I.
General Surgery.

C. G. W. Brown	C. H. Hole
E. B. Carpenter	W. Hughes
E. L. Clark	H. S. Johnson
H. D. Cockram	G. S. Loader
G. T. C. F. du Plessis	J. W. Mansie
F. J. Goldsworthy	J. A. Sidebottom
C. W. Harrison	N. G. Straschan
R. N. Hines	J. G. van Schalkwijk
L. B. Hilton	W. J. Wheatley

PART II.
Dental Surgery.

A. S. Bradshaw	S. C. Holms
J. J. Cochrane	H. S. Johnson
G. R. G. Druce	K. E. Pringle
W. D. P. Evans	C. R. K. Smith
M. A. Freeman	L. Symonds
A. H. Fuller	D. S. Wilson
L. B. Hilton	T. D. Wren

UNIVERSITY OF CAMBRIDGE.
M.Ch.
June, 1930.

A. Simpson Smith.

M.B., B.Ch.
June, 1930.

G. R. S. Stewart.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.
PART II.
June, 1930.

F. G. Booker	L. E. Houghton
	I. B. Morris.

UNIVERSITY OF LONDON.
THIRD EXAMINATION IN DENTAL SURGERY.
PART II.
June, 1930.

T. W. E. Pugh.

SOCIETY OF APOTHECARIES OF LONDON.
June, 1930.
Medicine.

*E. Lethem.

*Now holds the diploma.

Papers by Guy's Men

S. E. Denyer. A case of narcolepsy, *B.M.J.*, 1930, i, 1172.

W. Kelsey Fry. Walkerite, *Brit. Dent. J.*, li, 720.

Change of Address

D. Hammond-Williams, L.D.S., 6, Hyde Gardens, Eastbourne. Tel. unchanged. *Eastbourne* 657.

W. F. Hudson, M.B., B.S., 11, Dashwood Road, Banbury, Oxon. *Banbury* 258.

Appointments

N. Burgess, M.A., M.D., M.R.C.P., Clinical Lecturer in Diseases of the Skin, University of Bristol.

W. F. Hudson, M.B., B.S., Assistant Medical Officer to the Horton General Hospital, Banbury, with charge of the Radiographic Department

W. P. Ker, M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Halstead District, Essex.

Marriage

HUDSON—REYNOLDS—On 6th June, 1930, at Croydon Registrar's Office and at Friend's House, Euston Road, N.W.1., W. F. Hudson, M.B., B.S., to Dorothy, daughter of Mr. and Mrs. J. Bryant Reynolds, of Cou'sdon, Surrey.

EDS. J. B. B.
P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *26th July* 1930 *Number* 1096

PASSIM

SOME months ago the choice of a career was discussed in these columns. So large a place does this subject occupy in our Editorial mind—privately we must confess as well as officially—that it forces itself once again into prominence. There comes a time when all but the chosen few must shake off the kindly dust of the Hospital's well-worn precincts and enter upon a career. This momentous occasion is tempered by some who compromise by doing locums for a few months, while they look around. This is both moderately remunerative and also gives time and experience to help in the final choice of a career.

There are some who have done well at Guy's and have been advised to equip themselves with the higher qualifications of the College of Physicians or Surgeons, and aim ambitiously at the dizzy and seemingly inaccessible heights of consultant practice. Some of these are lucky enough to find Junior Staff appointments vacant and so be enabled to keep the financial wolf from the door of their humble lodging, while they lie, well-reputed, in the chrysalis of obscurity, before emerging as black-coated and striped-trousered butterflies to flutter resplendent between consulting room and nursing home. Others equally competent and capable of higher things have found no vacant Junior Staff appointments and have been financially forced to abandon all thoughts of venturing on that hard and stony path that leads to glory. Whether the competent man becomes a gilded butterfly or a jaded G.P. depends sometimes entirely on whether or not there are any Junior Staff vacancies at the time when his House appointments end. There is, we believe, a remedy for this. Clinical is an appointment ridiculously anachronised—an opportunity to observe the best cases in the Hospital for those least capable of appreciating them. Were Clinical converted to an appointment to be competed for by those who had already done house jobs—the Junior Staff appointments might be filled by candidates who had just finished Clinical.

For those who despise consultant or specialist work there are the Services or General Practice.

Those of us who are at Guy's know very little about life in the Services, and we should therefore take every opportunity of hearing about the details first hand.

Lieut.-Col. Reinhold, I.M.S., who is an old Guy's man, at present Chief Medical Officer at Delhi, will give a short address on "The Indian Medical Services: its Advantages and Opportunities," on Monday, July 28th, at 4 p.m., in Class Room III in the Medical School. He is anxious to encourage the recruitment of Europeans into the I.M.S., and he is particularly anxious to have the opportunity of interesting newly-qualified Guy's men in the I.M.S. as a career.

Col. Reinhold has a wide experience of life in the I.M.S. and his lecture should be one of great value.

Finally there is general practice, and that, if entered upon after careful consideration, is a life of tremendous interest.

WE are proud to have the opportunity of offering our congratulations to Mr. C. H. Fagge on his re-election to the office of Vice-President of the Royal College of Surgeons of England and to Mr. R. P. Rowlands on his election to Vice-President this year.

WE very heartily congratulate the recent winners of prizes and scholarships, especially Mr. N. S. Plummer, who won the Treasurer's Gold Medal for Clinical Medicine, and Mr. C. K. Simpson, who won the Medal for Clinical Surgery.

Obituary

LT.-COL. HUGH WATTS, I.M.S. (Retired)

HUGH WATTS came to Guy's as a student in October, 1898 with a distinguished record, from Dulwich.

He had been a brilliant school-boy ; head of the Preparatory School, he gained a scholarship to the College, and took many prizes on the science side, passing the London Matriculation and his Preliminary Science Examination in the First Class from School.

Throughout his hospital career he never failed in an examination, generally passing in the first class, and in 1903, he took the triple qualification of the Colleges in his stride, and went on to the M.B., B.S., in the same year, in which latter he was awarded the Gold Medal in Surgery.

In January, 1904, he entered the Indian Medical Service, in which his father had served before him, and took the Montifiore Medal in Surgery at Netley.

He was seconded and returned to Guy's at the end of 1904, to fill house appointments, being A.H.S. to Mr. Lane and Obstetric Resident.

He went to India in the autumn of 1905, and after a short period on the Military side, was transferred to Plague duty in the Punjab. Here he combined a great deal of sport with work and became a very notable " shikarri " with rod, gun and rifle. Later he became a Civil Surgeon in the Central Provinces, and spent most of his service in a delectable station, Betul, noted for its good climate and fine jungles. He quickly improved the quality of the work there and equipped his hospital with many modern and up-to-date appliances.

During the War he served in the early stages in France, and after the War returned to Betul.

He married in 1916 the sister of an old school friend, who pre-deceased him after eight years of happy married life. He, himself, retired from the service in 1928 on account of ill-health.

As a boy and young man he was of exceptional physique and robust constitution, and I remember an occasion at school when he walked from London to Brighton and half way back in a night, but his enthusiasm for sport combined with the rough conditions under which he lived on Plague duty undermined his health, and as early as 1910 he was consulting the late Dr. Lauriston Shaw for an atonic dyspepsia, which handicapped him for ever after, and later an intractable neuritis further incapacitated him, but his courage and interest in life, especially country life, never deserted him.

He died with tragic suddenness of heart failure at Aix-les-Bains, on 19th June, 1930, in his fiftieth year, and leaves one son, Christopher.

Hugh Watts will always be remembered by his contemporaries as a brilliant student and witty companion, who always worked hard and played hard, and by his friends for his lovable and sunny character.

C. H. R.

Enlarged Lymphatic Glands in Children

A Clinical Lecture by Dr. H. C. Cameron

(1) *Simple Adenitis.*
(2) *Tuberculous Lymphadenitis. Chronic and localised ; Acute and generalised.*
(3) *Lymphadenoma. Hodgkin's Disease.*
(4) *Lymphosarcoma.*
(5) *Leuchæmia Lymphatica.*
(6) *Syphilitic Lymphadenitis.*
(7) *Lymphadenitis Accompanying Infective Disorders. Glandular Fever ; German Measles ; Scarlet Fever ; Diphtheria ; Still's Disease.*

GENERAL CONSIDERATIONS.

GENTLEMEN,—Enlargement of the lymphatic glands occurs more commonly as a symptom in childhood than in adult age. In the nomenclature common in this country we speak of these collections of lymphoid tissue as glands. The term ganglion or node is more accurate and commits us to less. They act as stations or junctions connecting the numerous incoming lymphatic vessels with the larger efferent trunk. In childhood, and especially in infancy, the activity of metabolism is such that the percentage of water in the whole body is considerably higher than in later life, the volume of lymph is greater and the circulation of lymph more free. The plumpness and roundness of the body of the infant, the relatively large number of lymphocytes in the blood, and the wide superficial lymphatic sinuses in the skin and mucous membranes are features which result from the relative excess of lymph. In the same way it is characteristic of infancy and early childhood to show a relative prominence of lymphatic tissue in all situations, in the thymus, in the lymphatic nodes and in the submucous lymphatic nodules (tonsils, adenoid vegetations,

Peyer's patches, solitary follicles in intestine, trachea, bronchi, etc.). In very many young children the superficial lymphatic glands in groin, axilla and neck are easily palpable as small, freely movable nodules varying in size from that of a pea to that of a bean. As a rule these glands are most easily felt in children who are thin, when they may be not only palpable, but visible. Nevertheless, in plump children, the glands may be in reality larger, though their outline is obscured. In thin children, in the same way, it is not common to find that the Peyer's patches are large. More often only the stroma persists (Shaven Beard appearance). In plump children, on the other hand, they are usually prominent. Perhaps the rarity of intussusception in the wasted child and its frequency in the plump infant is to be explained in this way, on the assumption that the very prominent Peyer's patches become invaginated and form the starting point of intussusception.

Unless hypertrophied, or enlarged by inflammation, in response to infection or irritation in the area which they drain, the lymphatic glands tend to diminish in size in conditions in which the body emaciates. In the amount of lymphoid tissue present in the body, it is apparent that children differ widely within normal limits. When lymphoid tissue is present in great profusion in all or most of the usual sites we speak of a condition of status lymphaticus, or status thymo-lymphaticus. During life it is not, in general, possible to recognise the presence of this generalised overgrowth, although it is generally true that those who, after death, show this peculiarity have been plump and watery, with a tendency to suffer from a variety of chronic catarrhal processes in the skin and mucous membranes (eczema, seborrhœa, asthma, mucous colitis) from anaphylaxis and from a tendency to react with unusual severity to almost all infective conditions. Status lymphaticus is generally found only in the bodies of children who have died suddenly. When a long and wasting illness has preceded death, this dehydrated body shows little persisting lymphoid tissue.

In the active stages of congenital syphilis in infancy, there is almost always some enlargement of the subcutaneous lymph nodes. While other glands are prone to enlargement from many causes, the epitrochlear gland is little likely to be affected by any cause other than syphilis. For this reason enlargement of this gland is always suggestive though by no means pathognomonic of congenital syphilis. The enlargement is only slight and is not always easy to appreciate in the fat arm of a young infant. The elbow should be bent to a right angle, and the examining finger should explore the anticubital space above the internal condyle and upwards along the sulcus bicipitalis as far as the middle of the arm. The gland is sometimes situated unusually high in the arm. A special diagnostic importance has also been attached to enlargement of the lateral thoracic chain of glands which are found in the upper intercostal spaces in a line passing down from the axilla. Enlargement of one or more of these little glands is suggestive of the presence of tuberculosis of the mediastinal glands.

Finally it may be said that in an infant enlargement of the preauricular gland, in association with an ear discharge, is apt to indicate otitis media of tuberculous origin. If, in addition, there developed a paralysis of the facial nerve on the same side, the trio of symptoms is pathognomonic.

(1) *Simple Adenitis*—

Simple or inflammatory adenitis of the cervical glands is most commonly secondary to tonsillar infection. This secondary adenitis is especially frequent in young children and it may then occur with but little to show in the tonsil in the way of tonsillitis. The infection may be said almost to pass direct through the tonsil to the glands. The younger the child the more common is termination in suppuration.

The course of secondary adenitis may be very prolonged. The symptoms are characteristically intermittent. On one day, or part of a day, the child may appear almost well, and then later the temperature may rise again, the glands swell and become painful and the child grows ill, fretful and confused. For weeks together this changing picture may persist before the enlargement of the glands and the symptoms finally subside.

Secondary adenitis is not to be confused with glandular fever. In secondary adenitis the differential blood count shows an increase, not of mono-nuclear, but of polymorpho-nuclear cells, the tonsils are the primary seat of infection, the spleen is not enlarged and there is always risk of suppuration. In young children the retropharyngeal gland may be involved in the adenitis.

(2) *Tuberculous Lymphadenitis.*

Chronic caseous disease of the lymphatic glands is common in three situations ; in the neck, when the infection has generally taken place through the tonsils, and when careful microscopic examination of the excised tonsil may possibly show tubercular infection, in the mesentery, when infection has generally taken place through the bowel wall and in the mediastinum when the infection may be either direct from the respiratory tract or perhaps secondary to infection of mesenteric glands.

Tuberculous adenitis is the most common cause of an enlargement of the cervical glands upon a considerable scale. In discussing enlargement due to lymphadenoma, lymphosarcoma, syphilis and

other causes, the points which may serve to distinguish these conditions from chronic tuberculous lymphadenitis will be emphasised. As a rule the glands before reaching any very great size become matted together and adherent to the deeper parts or to the skin. There is always a tendency for the gland to break down and form an indolent abscess which, if untreated, finally discharges through the skin leaving an unsightly puckered scar.

In the milder cases the difficulty is to distinguish between an adenitis which is due to simple non-tuberculous inflammation and a tuberculous adenitis. In former times, indeed, the name scrophula or "the King's Evil" was applied indiscriminately to both forms of swelling and it was only when the tubercle bacillus was discovered in a proportion of the cases that the term scrophula was limited to those definitely tuberculous. In most cases the tuberculous infection is predisposed to by a previously existing unhealthy state of the naso-pharynx and a previous non-tuberculous simple enlargement of the glands. Scrophula, from this point of view, may be said to be tuberculosis modified because it is implanted in a catarrhal soil. The scrophulous child, at least in long-continued and severe cases, tends to suffer from a variety of catarrhal infections. Thus there is almost always chronic conjunctivitis, often with phlyctenular ulceration, and consequent photophobia. The acrid discharges from the nose are apt to irritate the upper lip and to render it hard, swollen and infiltrated. Chronic mouth breathing leads to alteration in the facial contours, maldevelopment of nose, hypertrophy of the lips, arching of the palate and irregularity of the teeth. Eczematous and impetiginous outbreaks upon the skin are common and often leave behind disfiguring, pitted scars. Scrophulous disease of the joints and bones, tuberculides in the skin (the papulonecrotic tuberculide) and lichen scrophulosorum, are all occasionally associated with chronic tuberculous adenitis.

The detection during life of enlarged mesenteric glands, due to tuberculosis may not be easy, while involvement of the mediastinal glands may proceed far without it being possible to detect definite alterations in the physical signs and without the production of characteristic symptoms.

In the case of tuberculosis of the mesenteric glands, in the absence of intestinal ulceration, abscess formation, ascites, plastic peritonitis or intestinal obstruction, the diagnosis must depend upon the existence of a palpable mass. At times the condition is discovered unexpectedly during a laparotomy performed in the expectation of finding some other condition. In case of doubt the whole abdomen should be systematically palpated. In young children this is best done bimanually, with the finger of one hand held stationary in the rectum while the other hand upon the abdomen brings down all available structure within the abdomen, so that they can be felt between the two hands. In an infant such an examination may sometimes be made during sleep. With older children a general anæsthetic may be necessary. In palpating the abdomen when the wall is relaxed, the two hands should be made to meet as deeply as possible, grasping on either side the mesentery at its oblique line of attachment across the abdomen. An X-ray examination is only likely to help in the event of some of the glands being calcareous, a comparatively frequent termination of the infection.

Tuberculosis of the bronchial glands may also remain latent. There is, however, always present the risk that the lungs may be reinfected by a reverse current along the lymphatics of the bronchi. In other cases the blood stream becomes infected, often after some acute illness, especially measles and whooping cough, so that a general miliary tuberculosis with terminal meningitis results. In young children the tuberculous gland may break down and discharge its contents into a bronchus or into the trachea often with immediately fatal results. This rarely happens in children after the first two years of life. In later childhood, very rarely, we meet with evidence of obstruction of a main bronchus or even of the trachea, by direct pressure of a greatly enlarged gland. In all cases the most common glands to be involved are the gland at the bifurcation of the trachea, and the glands which surround the right bronchus at the root of the lung. Involvement of the left bronchial glands is less common. The clinical manifestations even when the disease is active are often vague and equivocal—wasting, pallor, fretfulness, fever, cough which may be paroxysmal in character and may arouse suspicion of whooping cough. Hoarseness of voice or of the cough is always suggestive and at times a low-pitched stridulous sound on expiration may strike the ear.

Physical examination also is apt to lead to indefinite results. With considerable enlargement impairment of resonance may be appreciable on one or other side of the manubrium sterni. Direct percussion of the spines of the vertebræ should be practised. The note yielded by the first four dorsal spines is normally much less resonant than that yielded by the fifth and lower spines. A mass of glands of considerable size in the posterior mediastinum will evince itself by a lack of resonance on percussion over the fifth and perhaps the sixth vertebral spine. A steadily increasing fullness of the superficial veins of the chest wall on one or other side affords valuable evidence.

D'Espine's sign consists in the prolongation downward of the pectoriloquy and bronchophony which is normally heard over the cervical spines to a point which may be as low as the third or fourth dorsal spine. Over the same area a bronchial character of the breathing is also heard and must serve when the child cannot be induced to speak or whisper. Eustace Smith's sign consists of a systolic bruit heard at the base of the heart when the child's neck is hyperextended, and which is inaudible when the head is bent forward.

In anæmic and febrile children, however, a bruit of this description is of common occurrence apart from enlargement of glands. Search should always be made for abnormal enlargement of the glands in the axilla, in the lateral thoracic chain, and above the clavicle when the arm is drawn downwards to the full extent, although, in these situations, small soft glands very freely movable are often normally palpable. There may be a sensation of fullness apparent on palpating the suprasternal notch between the tendons of the sternomastoid muscle. An X-ray examination may be of assistance. When the glands are calcareous the shadow is unmistakable. In other cases it is commonly equivocal and sometimes unreliable. Tubercle bacilli are seldom present in sputum which the child coughs up into the mouth.

Very rarely we meet with cases of acute and generalised tuberculosis involving simultaneously almost all the glands of the body. This may occur in a child who has till then been in good health, or it may proceed as a terminal event from some local focus of tuberculosis. In either case the disease sets in with great severity and suddenness, with pyrexia, rapid emaciation and prostration, while almost all the glands, axillary, inguinal, cervical, ante-cubital, pre-auricular as well as those deeply seated, become greatly enlarged and even tender. The skin over them may become red and inflamed, as though suppuration were about to ensue. The majority of such cases, though not all as might perhaps be expected, have proved fatal. Cases of this nature must be distinguished from lymphadenoma, in which, save in the case of an accidental and localised secondary infection, all trace of acute inflammation is absent and matting of the glands, redness of the skin, and tenderness is absent. Leuchæmia is excluded by an examination of the blood; lymphosarcoma remains for some time localised to one group of glands and only involves others at a late stage. In all these conditions there may be some enlargement of the spleen. In glandular fever the symptoms are seldom so severe and it is characteristic that different groups of glands enlarge and subside one after the other. It is possible that in the disease known as glandular fever a mono-nucleosis, that is, a great increase of mono-nuclear lymphocytes up to 40 or 50 per cent. of the whole, is invariable.

(3) *Lymphadenoma or Hodgkin's Disease*—

Hodgkin's disease is not commonly met with until the later years of childhood. It begins with the gradual enlargement of a group of glands, almost always cervical. At first there is very little impairment of the general health, and the child is brought to us because of the very obvious disfigurement which has already existed for a long time, rather than with a complaint of ill health. When once the swelling is established, the course of the disease towards its fatal ending, a course which, though sometimes much slower, is often complete in about two years, is steady and progressive. Gradually the evidence appears that other groups of glands have become involved. The spleen becomes greatly enlarged, the liver to a less extent.

Finally, symptoms due to pressure, exerted by the masses of glandular tissue, become apparent, œdema, venous enlargement and engorgement, jaundice, etc., while the anæmia becomes more and more profound. Hæmorrhage from the mucous membranes is a common terminal symptom. In the later stages, especially, there is apt to be a remittent or intermittent pyrexia. In a few cases, bouts of very high but short-lived pyrexia are a characteristic symptom. From tuberculosis of the glands it may be difficult in the early stages to make a clear distinction. In general, the glands are larger, softer, more discrete, and lack that fixation to one another, to the skin and to the deeper parts which results from the almost constant periadenitis of tuberculous adenitis.

Occasionally we meet with cases of undoubted tuberculous disease in which, however, all these peculiarities are lacking. If doubt exists it is necessary, in order to achieve certainty, to excise a portion of the gland for microscopic examination. From lymphosarcoma, Hodgkin's disease is distinguished by the absence of all local infiltration, with consequent fixation, by its slower course and higher pyrexia. In general, the spleen is more enlarged in Hodgkin's disease than in lymphosarcoma. The liver on the other hand may be larger in lymphosarcoma and jaundice is apt to be an earlier and much more prominent symptom. From lymphatic leuchæmia it is distinguished by a blood examination, as well as by its much slower course.

The rare cases of syphilitic adenitis will be referred to later. Since they may be associated with an enlargement of the spleen, confusion with Hodgkin's disease may arise in the absence of evidence of a syphilitic infection.

(4) *Lymphosarcoma*—

Sarcoma of the lymphatic glands, though not a disease of infancy, is met with rarely in children at a later age. It begins in most cases in the mediastinal glands, although it soon spreads to the cervical, and may first make its presence apparent by their enlargement. More rarely the cervical glands, or the retro-peritoneal are first attacked. In whatever situation the enlargement of the glands presents, there is bound in the early stages at least to be difficulty in distinguishing lymphosarcoma from lymphadenoma, and from tuberculous disease.

In general, however, the course of the disease is much more rapid locally while extension to groups of glands remote from the original site, to the inguinal or axillary glands for example, is less likely to occur than in lymphadenoma. On the other hand, pressure symptoms, especially pressure upon veins occur earlier. There may be infiltration of adjoining structures by the sarcomatous growth. The spleen is less enlarged than in lymphadenoma, the liver often much more enlarged, while jaundice is an earlier and more frequent symptom. The characteristic bouts of pyrexia of lymphadenoma are likely to be absent. From tubercular disease the more rapid growth, the local infiltration, the more rapid development of symptoms of pressure must serve to distinguish it, as well as the absence of other scrophulous symptoms, and of the evidence of the characteristic tendency toward softening and caseation.

(5) *Leuchæmia Lymphatica*—

The enlargement of the glands in leuchæmia is less likely to give rise to confusion, because of the characteristic results obtained from an examination of the blood. The disease is, in general, very rapid in childhood and the whole course to the fatal termination may be measured in a few months or even weeks. Hæmorrhages under the skin and from the mucous membranes are frequent, and the enlargement of the spleen is considerable.

(6) *Syphilitic Lymphadenitis*—

In the acute stage of infantile congenital syphilis, at the time when the rash, the snuffles and the periostitis are prominent symptoms, it is usual to find that most or all of the superficial lymph glands are slightly enlarged. The diagnostic value, in this connection, of a slight enlargement of the epitrochlear gland has already been mentioned. In the rare cases of acquired syphilis in childhood, a similar enlargement is found as part of the secondary stage, while since the primary chancre is generally to be found on the lip, the great enlargement and induration of the submental glands is a constant feature and should always arouse suspicion when an indurated sore appears in that situation.

Much more likely to cause a difficulty in diagnosis are the somewhat rare cases of enlargement of the cervical glands occurring in congenitally syphilitic children in later childhood. In these cases a rigid collar of very hard indurated glands may encircle the neck. In most cases the enlargement has occurred in children who exhibited other and unmistakable signs of syphilis such as are characteristic of this age, interstitial keratitis, nerve deafness, Hutchinson's teeth, saddle-shaped depression of the bridge of the nose and so forth. In the absence of these the simulation of tuberculous adenitis must be very close. In general, however, the glandular involvement is apt to be more widely spread, to involve, for example, the occipital and submental glands as well as those in the posterior triangle of the neck, and the enlargement may be associated with signs of localised lymphatic obstruction so that œdema is added to the swelling.

(7) *Lymphadenitis accompanying Infective Disorders:*

It is probable that epidemics of glandular fever upon a small scale are more common than is generally recognised. The disease is of unknown causation. The onset is sudden, with vomiting and pyrexia. On the second or third day the glands about the angle of the jaw become diffusely swollen and painful. The swelling is such that in most cases a diagnosis of mumps is likely to be suggested. The swelling does not, however, cross the line of the ramus of the jaw as it does in parotitis. Soon other groups of glands become involved, the cervical, axillary, inguinal, and in some cases at least the mesenteric. The enlargement may be considerable, to the size of a pigeon's egg. Though painful, the swelling is not indurated and the skin is not involved. They remain freely moveable. The spleen is seldom palpable. The whole course of the disease may extend over two or three weeks, the glandular enlargement subsiding in one situation and spreading to another. The end is always recovery and complications are very unusual.

Such an illness, if the clue is not given by the occurrence of other similar cases, must arouse fears of acute tuberculosis or of leuchæmia.

In glandular fever there is generally, at least, a considerable increase of large mono-nuclear lymphocytes up to perhaps 40 or 50 per cent. of the whole. In lymphatic leuchæmia the total leucocyte count is usually high, and 90 per cent. or more are lymphocytes.

In German Measles the enlargement of the glands behind the sternomastoid muscle is a characteristic symptom and may serve to help us to interpret a rash otherwise of doubtful signific-

ance. The glands are enlarged upon the second day of the disease, are hard, tender, never matted together and never suppurate. They may not subside for two or three weeks after the commencement of the attack. An accompanying conjunctivitis, the so-called "pink eye," is nearly always present. In scarlet fever, diphtheria and in measles, enlargement of the lymphatic glands in the neck is present in varying degree, dependent upon the degree of inflammation of tonsils and nasopharynx. It is only in scarlet fever that lymphadenitis is common or severe.

In that chronic form of multiple arthritis in children, known as Still's Disease, an accompanying enlargement of the spleen of slight degree and an enlargement of all the superficial glands, so that they are readily palpable, is the rule. During periods of higher pyrexia the enlargement may increase. The characteristic fusiform swelling of all the joints prevents confusion with other enlargements.

A Case of Original Sin

THE male child, J.—P.—æt. 5, was brought to the Front Surgery suffering from a dietetic error and wickedness.

As so often happens in cases of this type there was considerable difficulty in obtaining a history, and an examination of the child was therefore considered essential.

Alimentary system.—Tongue, blue-black[1]; Tonsils, cryptic; Fauces, injected; Œsophagus, containing monies[2]; Stomach, rather gastric; the Little Bowels, as yet costive.[3]

Cardio-vascular system—Heart, pure[4]; Pulse, rapid; Rhythm, several "hot runs" were recorded. The P-wave was inverted electro-cardiographically.

Genito-urinary system.—Slight eosinuria was present (boiled sweets).

Respiratory system.—Costo-phrenic angles were clear to all intents and purposes. Diaphragm gave an effective aperature of F. 4.5. They said that they (he, she and it) saw a gland.

Nervous system.—The boy trembled rather.

Special senses.—Both drums retracted.[5] The pupils were dilated, Heaven knows why. He had a conjugate divergent squint.

Every investigation within one's power having been performed, and treatment of symptoms having already begun, the question of diagnosis alone remained. Was it the coin or was it the boy that was at fault? In fact, the differential diagnosis lay between one of original sin, or a recognition of the depravity of an inanimate object.

The essential difference between the two conditions is one of immediate reaction to environment in the case of the inanimate object, which, under certain conditions, lend themselves very readily to an amelioration of their lot.

Exorcism of their vices is possible by one or another method of approach—ourselves, we have had the greatest success with the word of mouth, especially if sung in low tones. A specific example of this kind is to be found in the case of a pre-war motor car, which, owing to damage sustained in France, had some difficulty in keeping the tyre upon the spare rim flange. If he permitted himself to undergo the degradation of puncture, one was faced with the problem as to whether or no depravity would supervene in the dejected state and that he would not listen to reason.

Time, as well as space, being usually a function of all these incidents, the melodious but inherently weak method of euphonopraxis was adopted; it having been proved that beyond doubt the chaunting of "Mr. Sankey is our friend, Mr. Sankey helps us," would immediately drive out the most vicious thoughts and render one's tyre firmly bound to the rotating rim. Accordingly, this idea was tried in the case before us; a slow, yet dignified cadence was started of "Penny wise and pound foolish," coupled with an auxiliary mechanical method of subtotal inversion of the subject, and the application of kind but firm cuffs to the bottom.

The appearance of the coin was still delayed so that one had but little option but to diagnose "Original Sin," throwing all Pelagasian premises to the wind.

As psychology recognises the distinction of pleasure and pain, and metaphysics of good and evil, so morality assumes the difference between right and wrong in action, good and bad in character; but the distinction in metaphysics and psychology applies to what is, the difference in morality, is based upon a judgment of what is by what ought to be, and when the act or character does not correspond to the standard, this want of correspondence may in different relations be variously described.

In relation to human society, and the rules it imposes upon its members, action that ought not to be done is *crime*[6]; a habit which is injurious to a man's own moral nature, especially if it have evil consequences, is described as *Vice*.[7] If a man is thought of as being under the authority of a Deity, any transgression of this Being's laws is *Sin*.

On application to his mother as to whether there had been any transgression of the Maker's laws, she diffidently replied, that he had always been fed

according to the instructions on the tin.[8] This field of examination having been rendered sterile,[9] one began to believe that one must be dealing with an exaltation of the Subliminal Self.[10]

Myers has conceived the soul of man as capable of existing independently of his body in the same extraterrene realm.[11] He regarded our normal mental life as only a very partial expression of the capacities of the soul, so much only as can manifest itself through the human brain. He regarded the brain as still at an early stage of its evolution as an instrument,[12] through which the soul operates in a material world. So much of the life of the soul has failed to find expression in our conscious and organic life through its interactions with this very inadequate material mechanism, remain beneath the threshold of consciousness and is said to constitute the Subliminal Self. It is the leading feature of this protean conception that many of the abnormal manifestations that have commonly been regarded as symptoms of mental or nervous disease and degeneration,[13] are by its aid brought into line with mental processes that are by common consent of a high type, with the intuition of genius, the outburst of inspired poesy and the enthusiasm which enables the human organism to carry through incredible labours.[14]

Myer's hypothesis thus boldly inverts the dominent view which sees in all departures from the normal[15] symptoms of weakness and degeneracy and which seeks to bring genius and fervour down to the level of madness and hysteria. It is, in fact, to level up rather than to level down.

Further debate upon this subject was interrupted by a paroxysm of coughing, which, on investigation, proved to have brought up the penny. This led to a radical revision of our diagnosis and an inclusion of the case in our series of two cases of delayed depravity of inanimate objects with a note upon the use of the human voice in its treatment by tone notes.

The boy having been suitably detained for X-ray, then went home in the evening after a happy day had been spent by all. J. M. L.

REFERENCES.

1. Stephens suggests berries.
2. Coin of the Realm.
3. " Behaviour of Flies " (Lear) King. Author, W. Shaksper.
4. Dynamic measurement of strength omitted—no ten men available.
5. c/p Melody Maker, 1925, ii, 374.
6. Edgar Wallace Collected Works.
7. Vice " Like a gripping feeling." Is often associated with the tort. Cf. Longus.
8. Diet of Worms. de Alma Matre. 1608.
9. Sterile : read rather Barren. See Back Surgery. *loc. cit.*
10. Lower Beds of Creswell Cave.
11. Baguet's Chrysippus is unfortunately very incomplete.
12. Leata-Na-Bfian. Kissing stone.
13. Contrast Oberammergau and Arabella.
14. The Ecstasy of St. Camilla.
15. N.S. definitely not Saturdays.
16. =1=slip coach for Piddinghoe by this train.

A Short History of Anæsthesia

By Ronald Jarman, Esq., M.R.C.S., L.R.C.P.

THIS year being the centenary of Henry Hill Hickman, the founder of anæsthesia, it was thought that a brief review of the means employed to relieve pain from the earliest times to the present might help a few people who are interested in the subject.

Man has tried from the very beginning to alleviate pain. Sacred and ancient history give us a faint idea of the means they had to hand and how they were used.

Helen of Troy used nepenthe, though this is contradicted, and it is believed that mandragora was actually taken. She used this on her victims as well as for the relief of pain. In other parts of the world hemp and opium were in use. The Egyptians are supposed to have mesmerised their victims and to have compressed the carotid arteries of patients who had to have abscesses opened by a knife or a limb amputated.

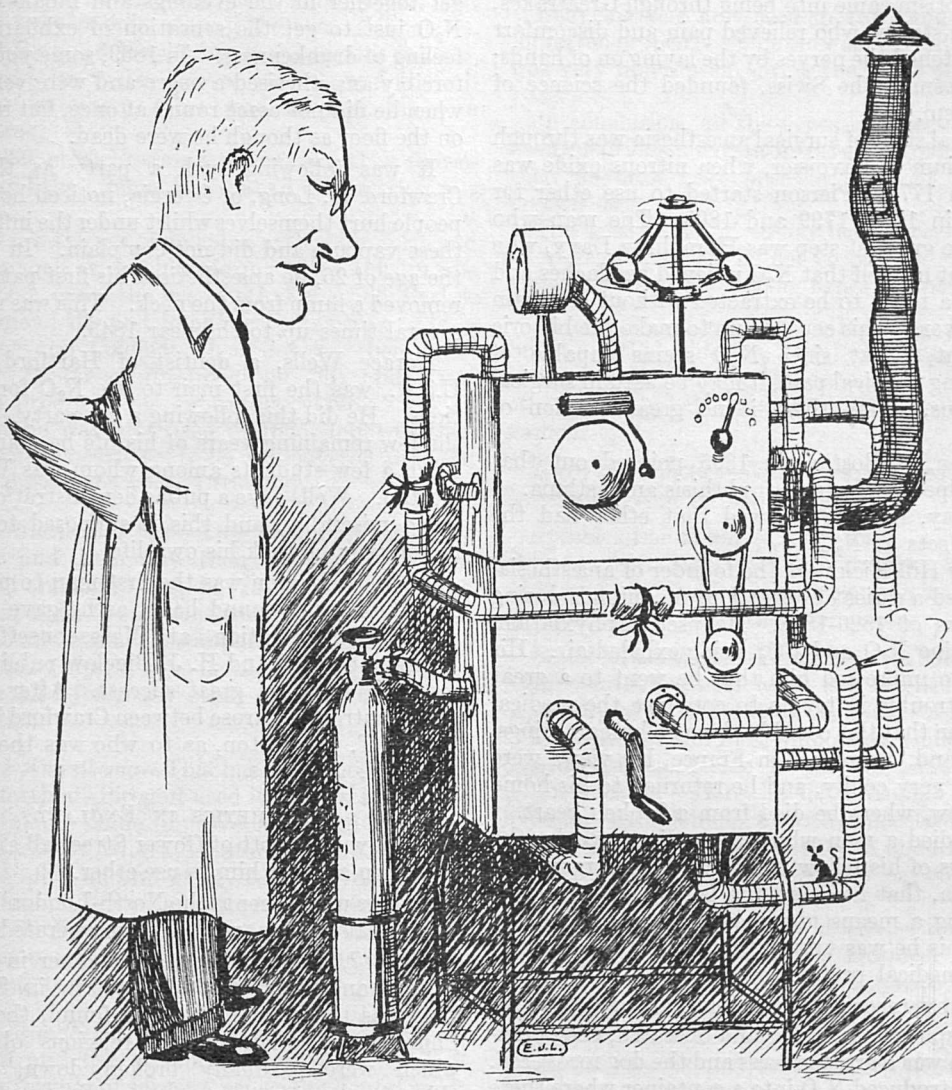
A form of anæsthesia was the exaggerated raving of the priestess Pythea—due to the influence of carbon dioxide—when acting as the mythological oracle of Apollo. The grotto of Del Cane affords examples of this.

The Christians, in the early days, when they were being persecuted by the Romans, used to eat mandragora in order to relieve their pain and suffering.

The Chinese and the Jews used hemp or hashish by inhalation. Hoatho, the Chinese practitioner, used this and other drugs to help the afflicted.

In the middle ages, Hugo de Lucca stands out because he used an oil, which was prepared from opium, unripe mulberry, hyoscyamus, juice of the hemlock, juice of the leaves of wood ivy, lettuce seeds, dock seeds and water hemlock, boiled with a sponge. This was soaked in hot water, applied to

"MONUMENTS OF MEDICINE"—II.



E. P. P.—The 1940 Model.

the nose and sleep ensued, vinegar was used to restore the patient to consciousness.

Geanbattista Porta, a surgeon of Naples, used an inhalation of essence of hyoscyamus, solarium, poppy and belladonna in a lead crucible.

The Assyrians compressed the carotid arteries before amputating a limb. Valverdi went a step further, and compressed the part affected.

Hypnotism came into being through Greatrakes, the Irish stoker, who relieved pain and discomfort and quietened the nerves by the laying on of hands; while Mesmer, the Swiss, founded the science of mesmerism.

The real start of surgical anæsthesia was through the medium of Lavoisier, when nitrous oxide was found in 1774. Pierson started to use ether for asthma in 1785, 1799 and 1800. The man who made the greatest step was Humphrey Davy, who found out himself that N_2O relieved headaches and enabled a tooth to be extracted without any pain whatsoever. This caused him to make the historic statement "that since N_2O seems capable of destroying physical pain, it may be used in surgical operations, where there is no great effusion of blood."

Warren, of Boston, in 1805 pointed out that ether helped patients with phthisis and asthma.

Faraday, in 1818, showed that ether had the same effects as N_2O.

Henry Hill Hickman, the founder of anæsthesia, performed a series of operations on animals during the years of 1820-1828. He used asphyxiation, introducing N_2O and CO_2, using exhaled air. His results so impressed him that he went to a great deal of trouble in trying to convince the medical profession that this could be done on human beings. In England, as well as in France, his views were received very coldly, and he returned to his home in Ludlow, where he died from a broken heart.

Thus died a man who was so distressed by the sufferings of his fellow beings when undergoing an operation, that he spent the best years of his life in finding a means of removing pain and having found this he was unable to convince his brothers in the medical profession.

His seven recorded experiments are as follows :—

1. He asphyxiated a dog and operated, the operation was a great success and the dog recovered.
2. He introduced N_2O into a container where there was a dog, the dog was anæsthetised and he operated, a great success.
3. He repeated the first experiment, a great success.
4. He gave CO_2 to a mouse and obtained equal success.
5. He repeated No. 4 on a dog, again successful.
6. He repeated this again on a rabbit, successful.
7. He anæsthetised a kitten, using exhaled air, and this also was successful.

In America, following the results published by Humphrey Davy on medicated vapours, the younger branch of the medical profession started the famous ether and N_2O parties. These parties, in the first place were got together for the fun of the thing and not for any scientific purpose, but they were the real means of founding ether and gas anæsthesia. A number of young people used to get together in the evenings and inhale ether or N_2O just to get the sensation of exhilaration or feeling of drunkenness. In 1839, some young men forcibly anæsthetised a negro and were very upset when he did not come round at once, but remained on the floor as though he were dead.

It was following such a party as this that Crawford W. Long, of Georgia, noticed how easily people hurt themselves whilst under the influence of these vapours and did not complain. In 1842, at the age of 26, he anæsthetised his first patient and removed a lump from the neck. This was repeated several times up to the year 1845.

Horace Wells, a dentist of Hartford, Conn., U.S.A., was the first man to use N_2O for extractions. He did this following a gas party. During the few remaining years of his life he managed to teach a few students among whom was W. T. G. Morton. Wells gave a public demonstration which failed miserably, and this is supposed to be the reason why he took his own life.

W. T. G. Morton was the first man to put ether anæsthesia on a sound basis, as he gave the first public demonstration at Massachusetts. Dr. Warren operated and H. J. Bigelow published the results; it was a great success. After this the great controversy arose between Crawford W. Long and W. T. G. Morton, as to who was the first to use ether.

Anæsthetics in England.

Bigelow told Bott of Gower Street all about this operation and got him to use ether.

Squires used ether at the North-London Hospital with great success, while Liston operated.

In 1847, J. Y. Simpson used ether in cases of labour, and later used chloroform in Scotland. This was the greatest blessing found, though the Church of Scotland raised religious objections, which were gradually broken down, so that chloroform came to stay.

From 1847, anæsthetics went steadily ahead until in 1900, Flourens demonstrated ethyl chloride and chloroform. John Snow experimented from 1847-1858, and then wrote a very interesting paper. J. T. Clover followed him and got George Harley to make the well-known alcohol, chloroform and ether mixture.

In 1861, Kerosoleine was found, followed in 1867 by bichloride of methylene.

In the same year, Junker invented his inhaler and Colton in America brought nitrous oxide to the notice of everybody by lecturing and writing papers on the gas. This made Evans demonstrate the use of this gas at the Dental Hospital in London.

Andrews, of Chicago, demonstrated the great value of using oxygen with nitrous oxide, and how the length of anæsthesia could be prolonged. This advance was overlooked for some years, but became very popular during the war.

Paul Bert and Hewitt improved on this in 1878, not, however, before Clover had showed the advantage of warm ether and devised his own apparatus.

In 1889, ether became more popular than chloroform, and the famous Hyderabad Commission was held.

1898 saw the use of morphia with chloroform and then oxygen with chloroform; after this, in the same year, came the use of ethyl chloride, Carless being one of the first to advocate its use.

Clover and Coleman then devised their nasal inhaler, Patterson improved on this and Kirkpatrick produced his expiratory valve.

Ethylene was first used in 1885, but was then forgotten, or nearly so, to be rediscovered and used widely during the years 1918-1922.

Intra-tracheal Ether—This was first used by Meltzer and Auer and then by Elsbergs. This means of unnatural sleep has rapidly advanced and is a great boon to surgeons who have to operate on the head and neck. The apparatus is excellent and Sir Francis Shipway is to be thanked for improving this, as also for many other types of anæsthetic apparatus.

Rectal Anœsthesia—This has advanced as much as any method, Pirogoff used it first on animals in 1847, Mollière made improvements and in its use was followed by Yversa, Hunter and Bull. To-day we have olive oil and ether, paraldehyde, glucose and normal saline; and then, following on the work by Sir Francis Shipway, there is Avertin; this is a great boon, not only for the very nervous type of patient, but also for the ordinary type.

Local Anœsthesia—This type of anæsthesia speaks for itself and has advanced very rapidly. It is used in all types of surgery, especially dental work. Americans and people on the continent use it considerably more than in England. It can be used without a general anæsthetic such as gas and oxygen or ether, or can be used in conjunction with these.

The ether spray was the first local anæsthetic, then Alexander Wood invented the hypodermic syringe in 1853, while in 1884, Koller found cocaine. In 1901, adrenalin was discovered, and this made local anæsthesia a bloodless operation.

Spinal Anœsthesia—This was first used by Koller and improved upon by Conning. To-day, stovaine, spinocaine, percaine and eucaine are in use; they are all very good spinal anæsthetics, having their own advantages according to their users.

Ethylene was first used in 1885 and then was forgotten or nearly so, but it was revived again and was very much used during the years of 1918 and 1922.

In conclusion, all the types of anæsthesia have been mentioned, except intravenous methods, and their histories have been briefly told up to the present day.

The anæsthetist of to-day has a very large field in front of him and he has to be thoroughly conversant with the following types of anæsthesia:—

Inhalation—Chloroform, ether, the two combined; ethyl chloride, ethyl bromide, ethylene, nitrous oxide, nitrous oxide and oxygen, while ether and ethyl chloride are also used with the last named.

Local Anœsthetics—Various kinds are used, but is usually given by the surgeon.

Spinal Anœsthesia—Using such solutions as stovaine, spinocain, eucaine, percaine and others. This type of anæsthetic is also supplemented with gas and oxygen and ether, if necessary.

Rectal Anœsthesia—Using avertin or paraldehyde. Intra-tracheal work is a science in itself, especially when using it for thoracic surgery.

Then one of the most important things for the anæsthetist to decide is the pre-anæsthetic he requires given. Here he uses atropine, morphia, hyoscine, paraldehyde, avertin, chloretone or some such drug according to the type of anæsthetic that is to be used and whether the patient is very nervous or not.

The dental surgeon is to be envied now he has such apparatus as the Guy's Hospital improved Walton, McKesson or Guy Ross; with these the anæsthetic can be prolonged as long as he wishes, thus relieving him of the necessity of hurrying. Nasal gas and oxygen can be given to young and old alike.

It is regretted that this is such a brief history of the past and present anæsthetics.

REFERENCES.

Anæsthesia, by Gwathmey.
Dublin Journal of 1875.
Bulletin of the Johns Hopkins Hospital, 1896—1898.
Current Researches in Anæsthesia and Analgesia, January—February, 1929.

Correspondence

Treatment by Heliotherapy.

To the Editor of the GAZETTE.

SIR,—I wish to thank you for drawing attention to the inefficient way in which treatment by heliotherapy is carried out in our Hospital. Since the onset of spring I have been trying to get everyone of my mastoid cases treated by this method, with the success to which you refer in your note in Passim. You are, however, mistaken in your description as to the reason for the small boy holding his arms in an unusual position ; this was due to the fact that he was sent out into the Park with a pair of breeches devoid of any means of suspension. Not that the child would have minded their falling down were it not that, in this position, they would impede his progress. He therefore tried holding them up with his two forearms ; in this way he was able to walk about slowly, but was quite unable to run.

I agree with you that the cause of this failure is that the minds of the majority work too much in a groove. I would add, however, that this is specially likely to occur in an aged institution such as ours, unless we go out as much as possible and see what is being done in other places. Fortunately for myself my own important work compels me to do this, and as the Fever Hospitals of the L.C.C. (late the M.A.B.), are only some fifty years old, we have during the past four years had some success in this treatment and I may claim to have had some experience in the matter.

First, then, we may say, that heliotherapy is by far the best treatment for patients convalescent from streptococcal diseases, their surgical complications or from operations performed for these latter.

Next we may be quite definite that heliotherapy by real sunlight and the open air is infinitely more valuable than of any form of artificial sunlight.

There are certain points in the technique of this treatment which may be of value to anyone who may want to employ it. The dangerous day is the hot one, not the cold one. The patients' skins, their heads and their spines must be protected, and it is quite surprising how strong the sun may become in London, and how quickly the patient may have too much, even in the early spring. On the other hand, it is possible to put the patients out on days that appear to be quite cold to the person wearing clothes. This is especially so with the patients who are up and able to move about. Some of the best results we have had were in July, 1927, a month that was notorious for the amount of rain and the small amount of sun. For these reasons, courtyards paved with asphalte or concrete are very suitable in the early part of the year or when showers of rain are making the grass wet. At other times they are unsuitable, or are even dangerous. There is one hospital where the open space is largely limited to areas paved with asphalte sunk between wards. They are large and spacious with plenty of room in which children can run about, but it is almost impossible to use them as soon as a really warm day arrives.

The best results are obtained on short-cut grass with trees over, so that the sun's rays are filtering through the leaves and are not reflected too strongly from the ground.

For these reasons our own Hospital is specially suited for this treatment, yet it is hard to get a new idea planted in its soil, not that the idea is entirely new. Our grandparents sent their patients to Margate and talked of Dr. Brighton long before they had heard of an ultra-violet or an infra-red ray. The only new idea is that it is unnecessary to go to Margate or to Brighton, and that there is quite enough sun in the Boro' during many months, whereby to get as good results as can be had by the seaside. I have tried many things to help, but as yet without success.

I got a friend to purchase a quantity of material and another made it up into heliotherapy garments of my device. They were treated as jokes for a week or so and then put on the top shelves of the ward linen cupboard, only to emerge at the annual stocktaking. I have invented a way of folding the sheet and blankets to " make " a tidy heliotherapy bed so that one can reply to the obstructionist who says the higher administrative authorities would never allow the untidiness of exposing the legs. I have had brought down a portable cot on a wheeled trolley, designed by D. Cubley at my suggestion. It was portable and light, and had it been copied, it would have got over the obstructionists, who said the cots are too heavy, or cumbersome, or hard to move ; but it remained in the workshop for two years until the owners demanded it back.

I own I am disheartened, the best part of the year is over, the sun will return, but it will be the scorching sun of July and August, and by September, everyone will have returned from their holidays, so saturated with sun, that they will want no more for a time and will imagine our patients do not either.

Yours, truly,

T. B. LAYTON.

19, Queen Anne Street, W.1.

Appointments

HOSPITAL.

THE following appointments and re-appointments have been made :—

Dental Officer to Salomons Centre—
Mr. E. R. Bailey, L.R.C.P., M.R.C.S., L.D.S., reappointment for one year.

Dental Anæsthetist to Salomons Centre—
Mr. A. D. Marston, L.P.C.P., M.R.C.S., L.D.S., reappointment for one year.

Medical Assistant—
Mr. R. L. Waterfield, L.R.C.P., M.R.C.S., reappointment for two years.

Tuberculosis Officer—
Dr. Geoffrey Marshall, M.D., F.R.C.P., reappointment for one year.

Instructor of Patients with Defective Speech—
Mr. H. St. John Rumsey, M.A., reappointment for one year.

Senior Assistant Bacteriologist—
Mr. L. W. Cann, M.B., B.S., reappointment for one year.

Additional Assistant Bacteriologist—
Mr. S. J. Nevasquez, M.B., B.S., D.T.M.& H., appointment for two years.

Assistant Anæsthetists to the Hospital—
Mr. J. R. B. Hern, M.B., B.Ch., M.R.C.P., reappointment for one year.
Mr. B. R. Medlycott, M.B., B.S., appointment for two years.
Mr. N. E. Pitt, B.Sc., M.B., B.S., appointment for two years.
Mr. T. T. Stamm, M.B., B.S., appointment for two years.

Anæsthetist to Bright Ward—
Mr. E. A. Scott, L.R.C.P., M.R.C.S., reappointment for two years.

Resident Medical Officer, Bright Ward—
Mr. J. C. Heather, M.B., B.S., appointment for one year.

Chief Clinical Assistant and Registrar, Actinotherapeutic Dept.—
Mr. J. F. Carter-Braine, F.R.C.S., reappointment for one year.
Mr. L. Forman, M.D., M.R.C.P., appointment for two years.

Chief Clinical Assistant and Registrar, Ear, Nose and Throat Dept.—
Mr. R. J. Cann, M.B., B.S. (to Mr. Mollison), reappointment for one year.
Mr. W. A. Mill, F.R.C.S. (to Mr. Layton), reappointment for one year.

Chief Clinical Assistant and Registrar, Neurological Dept —
Mr. R. N. Ironside, M.B., Ch.B., M.R.C.P., reappointment for one year.

Chief Clinical Assistant and Registrar, Ophthalmological Dept.—
Mr. S. C. R. Flaxman, M.B., B.S. (to Mr. Eason), reappointment for one year.
Mr. B. R. Medlycott, M.B., B.S., appointment for two years.

Chief Clinical Assistant and Registrar, Dermatological Dept.—
Mr. L. Forman, M.D., M.R.C.P., reappointment for one year.

Chief Clinical Assistant and Registrar, Children's Dept.—
Mr. A. C. Hampson, M.C., M.D., M.R.C.P., appointment for two years.

Chief Clinical Assistant and Registrar, Department for Psychological Medicine—
Mr. C. P. Blacker, B.M., M.R.C.P., reappointment for one year.

Chief Clinical Assistants and Registrars to Medical Out-Patients—
Mr. A. C. Hampson, M.C., M.D., M.R.C.P., appointment for two years.
Mr. R. L. Waterfield, M.R.C.S., L.R.C.P., appointment for two years.

Hæmatologist to the Hospital—
Mr. F. A. Knott, M.D., M.R.C.P., D.P.H., reappointment for one year.

Director of V.D. Department—
Mr. V. E. Lloyd, M.B., B.S., reappointment for one year.

Assistant Director (Female) of V.D. Department—
Miss M. Rawlins, M.B., B.S., reappointment for one year.

Medical Officers (Male) to V.D. Department—
Mr. N. L. Lloyd, M.B., B.S., reappointment for one year.
Mr. R. S. de Bruyn, L.R.C.P., M.R.C.S., appointment for one year.

Medical Officers (Female) to V.D. Department—
Miss V. I. Russell, M.D., reappointment for one year.
Miss M. R. Levack, M.B., Ch.B., reappointment for one year.
Mrs. D. K. Brown, M.B., B.S., reappointment for one year.

MEDICAL SCHOOL.

THE following appointments and reappointments have been made by the School Council. Duties to commence on October 1st, 1930 :—

Medical Registrar—
Mr. R. E. Smith.

Surgical Registrars—
Mr. W. D. Doherty.
Mr. N. L. Eckhoff.
Mr. D. W. C. Northfield.

Obstetrical and Gynæcological Registrar—
Mr. G. F. Gibberd.

Clinical Tutor in Charge of Preliminary Clinical Period—
Mr. E. R. Boland.

Anderson Demonstrator of Clinical Chemistry.
Mr. G. H. Oriel.

Demonstrator of Pathology, Whole-time—
Mr. C. F. Cosin.

Gull Student—
Mr. C. F. Cosin.

Demonstrator of Pathology, Whole-time, with Charge of Clinical Laboratory—
Dr. F. A. Knott.

Demonstrator of Anatomy, Whole-time—
Mr. G. Massie.

Demonstrators of Chemistry, Whole-time—
Mr. W. M. Colles.
Mr. E. Mathews.

Demonstrators of Chemistry, Part-time—
Mr. L. A. Elson.
Mr. J. D. Johnson.

Demonstrator of Biology, Whole-time—
Mr. J. S. Wilkie.

Sport

Guy's v. Bromley

PLAYED at Bromley, on Saturday, June 14th, and resulted in a draw. *Scores*—Guy's 193 for 8 (declared); Bromley 126 for 7.

Guy's.

S. R. Peatfield, c. & b. Stone	7
T. D. Ridsdale, c. & b. Moore	59
W. Lewis, c. Fraser, b. Cheney	23
J. A. G. Starnes, b. Cheney	12
H. Cameron, c. Brown, b. Cheney	16
W. H. Lewis, b. Stone	22
R. J. Eustace, not out	10
J. Durr, b. Moore	4
L. E. Marshall, c. McDougal, b. Moore	23
Extras	17
Total for 8 wickets (declared)	193

S. M. Witteridge and J. P. O'Shea did not bat.

Bowling—J. Durr 4 for 37, S. M. Witteridge 2 for 20, W. Lewis 0 for 32, J. P. O'Shea 0 for 17, L. E. Marshall 0 for 6.

Guy's v. Wellingborough School

THIS match was played at Wellingborough, on June 18th, and abandoned owing to rain.

Scores—Guy's 26 for 0; Wellingborough School 83.

Guy's.

T. D. Ridsdale, not out	15
H. Cameron, not out	10

W. Lewis, J. A. G. Starnes, S. R. Peatfield, R. V. Payne, L. E. Marshall, R. M. Outfin, S. M. Witteridge, J. P. O'Shea and J. Durr did not bat.

Bowling—J. P. O'Shea 5 for 24, S. M. Witteridge 2 for 28, W. Lewis 1 for 12, R. V. Payne 1 for 8, H. Cameron 1 for 1.

Guy's v. Bart.'s

THIS match was played at Honor Oak Park, on Saturday, June 21st, and resulted in a draw.

Scores—Guy's 130 for 4; Bart.'s 223 for 6 (declared).

Guy's.

H. Cameron, b. Roy Shunher	4
T. D. Ridsdale, b. Wedd	28
W. Lewis, b. Hodgkinson	6
J. A. G. Starnes, not out	50
R. V. Payne, b. Hodgkinson	15
J. Durr, not out	20
Extras	7
Total (for 4 wickets)	130

G. J. Clarke, W. D. G. Jones, S. M. Witteridge, R. M. Outfin, J. P. O'Shea, did not bat.

Bowling—W. Lewis 0 for 43, J. Durr 2 for 50, J. P. O'Shea 1 for 25, S. M. Witteridge 0 for 21, G. J. Clarke 1 for 17, W. D. J. Jones 1 for 16, R. V. Payne 1 for 39.

Guy's v. Private Banks

PLAYED at Honor Oak Park, on Wednesday, 25th June, and resulted in a win for Guy's by 3 wickets.

Scores—Guy's 145; Private Banks, 118.

Guy's.

T. D. Ridsdale, b. Black	3
E. V. B. Widdowson, l.b.w., b. Black	1
J. A. G. Starnes, b. Black	23
W. Lewis, c. Horne, b. Hopwood	31
H. Cameron, b. Black	0
S. R. Peatfield, c. & b. Hopwood	21
R. V. Payne, b. Black	14
J. Durr, c. Hopwood, b. MacMillan	30

R. M. Outfin, not out	0
S. M. Witteridge, l.b.w., b. MacMillan	4
J. P. O'Shea, not out	11
Extras	7
Total	145

Bowling—W. Lewis 1 for 24, J. Durr 2 for 16, R. V. Payne 2 for 15, J. P. O'Shea 4 for 29, S. M. Witteridge 0 for 30.

Guy's v. St. Ann's

MATCH played at Virginia Water on July 2nd, and resulted in a win for Guy's by 2 wickets.

Scores—Guy's 203 ; St. Ann's 142.

Guy's.

S. R. Peatfield, c. Harding, b. Llewellyn	3
T. D. Ridsdale, l.b.w., b. Willis	0
D. J. Rees, c. Rutherford, b. Llewellyn	40
J. A. G Starnes, c. Basson, b. Devine	28
H. Cameron, c. Basson, b. Llewellyn	3
E. V. B. Widdowson, c. Blaber, b. Devine	32
A. J. D. Lewis, c. Devine, b. Willis	0
G. J. Clarke, run out	14
N. Edwards, run out	23
S. M. Witteridge, not out	32
B. M. Outfin, c. Devine, b. Starkey Smith	0
Extras	27
Total	203

Bowling—G. J. Clarke 3 for 28, A. J. D. Lewis 3 for 21, D. J. Rees 1 for 23, N. Edwards 0 for 28, S. M. Witteridge 2 for 12.

Guy's v. Honor Oak

THIS match was played at Honor Oak Park, on Saturday, July 5th, and resulted in a win for Honor Oak.

Scores—Guy's 88 ; Honor Oak 138.

Guy's.

S. R. Peatfield, b. Maxwell	8
T. D. Ridsdale, b. Gibson	0
W. Lewis, b. Gibson	36
J. A. G. Starnes, b. Gibson	4
G. J. Clarke, b. Gibson	5
D. J. Rees, c. Nichol, b. Gibson	0
E. V. B. Widdowson, b. Gibson	1
A. J. D. Lewis, b. Maxwell	7
R. M. Outfin, b. Gibson	17
S. M. Witteridge, not out	4
J. R. F. Popplewell, c. Nichol, b. Gibson	0
Extras	6
Total	88

Bowling—W. Lewis 1 for 34, D. J. Rees 3 for 36, S. M. Witteridge 1 for 22, G. J. Clarke 3 for 17, R. J. D. Lewis 2 for 25.

Tennis

Inter-Hospital Tennis

IN the Final of the Inter-Hospital Cup, on July 13th, Guy's beat Bart.'s by 11 matches to 2, on St. Thomas's ground, at Chiswick.

The singles were played in the morning, of these Guy's won 4.

Giesen was not quite up to his usual standard in his match with Salter. At the same time, Salter is definitely a good player, and took full advantage of Giesen's slight inaccuracies and lack of finishing power. Salter won in two sets by 6-3, 7-5.

Sidebottom had an easy win over Beilby, who appeared to be a considerably better doubles than singles player.

Mailer had a very good match with Hunt. In the first set the score reached 4 all, and it looked as though Mailer was playing with less certainty than his opponent. He is usually capable of producing the goods, however, when he decides to go to the net, and by means of suitably chosen sallies, he got the next two games. In the next set, 6 all was reached before he managed to break away with the last two games for the match.

Bruce-Pearson started shakily against Blackburn, who ran away with the first four games. At this point the former got his drives into going order and was able to put them back sufficiently severely to enable him to follow them in to the net with some safety. Four all was reached, the games then went with the service to 6 all, and the set was won at 8-6. In the second set Blackburn was playing with less confidence and lost it and the match, at 6-4.

Sharpe lost his first set by 6 games to 3, chiefly owing to the uncertainty of his service. In the second set he produced a display of his usual spectacular volleys, his opponent was duly shaken, and lost the set by 6-2. In the final set Sharpe led by 5 games to 1. Papert won the next three games and we began to fear that he was going to catch up ; fortunately this did not happen, and Sharpe won the next game for the match.

Hollis made a valiant effort to win the second set against Snell, but after getting to 6 all, lost the set at 8-6.

In the afternoon, Guy's won seven out of nine doubles matches, two being unplayed.

Giesen and Sidebottom lost their first set to love against Bart.'s first pair, but won the next two with ease.

Bruce-Pearson and Hollis worked very hard to beat Blackburn and Snell. The first set went to Bart.'s at 10-12, and they led 4-2 in the second set. At this point Hollis produced some very masterly lobs and the Guy's pair eventually won at 8-6. The third set was won 6-1 by Guy's.

The full results were as follows :—

J. Giesen lost to K. A. Salter 3-6, 5-7.

J. A. Sidebottom beat F. J. Beilby 6-1, 6-3.

C. R. Mailer beat J. A. Hunt 6-4, 8-6.

R. S. Bruce-Pearson beat J. R. Blackburn 8-6, 6-4.

E. Sharpe beat A. Papert 3-6, 6-2, 6-4.

G. J. Hollis lost to D. Snell, 2-6, 6-8.

Giesen and Sidebottom—
Beat Salter and Beilby 0-6, 6-2, 6-2.
Beat Hunt and Mullick 6-1, 7-5.

Sharpe and Mailer—
Beat Hunt and Mullick 6-4, 6-4.
Beat Snell and Blackburn 6-3, 6-2.
Beat Salter and Beilby 6-4, 6-2.

Bruce Pearson and Hollis—
Beat Snell and Blackburn 10-12, 8-6, 6-1.
Beat Papert and Beilby 4-6, 6-4, 7-5.

Hospital Information, etc.

MEDICAL SCHOOL.
SCHOLARSHIPS IN ARTS AND SCIENCE.

The following awards have been made for 1930 :—

Treasurer's Gold Medal for Clinical Surgery : —
C. K. Simpson—Medal.
A. R. Clarke—Certificate.

Treasurer's Gold Medal for Clinical Medicine :—
N. S. Plummer—Medal.
A. R. Clarke—Certificate.

Beaney Prize for Pathology to the value of £34—
M. J. L. Burtenshaw.

Golding-Bird Gold Medal and Scholarship in Bacteriology to the value of £20—
M. J. L. Burtenshaw, S. M. Silverstone, bracketted equal.

Entrance Scholarship in Arts of the value of £100—
Eric Saye, Alleyn's School, Dulwich.

War Memorial Scholarship in Science of the value of £200—
William Neville Mann, Alleyn's School, Dulwich, and Preliminary Science Classes, Guy's Hospital Medical School.

Entrance Scholarship in Science of the value of £100—
John Eber Spalding, St. Lawrence College, Ramsgate, and Preliminary Science Classes, Guy's Hospital Medical School.

Confined Scholarship in Science of the value of £100—
John Ronald Forbes, Alleyn's School, Dulwich, and Preliminary Science Classes, Guy's Hospital Medical School.

DENTAL SCHOOL.
SCHOLARSHIP IN ARTS AND SCIENCE.

The following awards have been made for 1930 :—

War Memorial Scholarship in Arts (£40 *per annum for four years*)—
John Francis Austin Smyth, St. Lawrence College, Ramsgate.

Entrance Scholarship in Science (£40 *per annum for four years*).
Derek John Wigginton, Strand School, Brixton.

Pass Lists

UNIVERSITY OF OXFORD.
M.B., B.Ch.
June, 1930.
Pathology.
M. J. L. Burtenshaw. W. H. Greany.
Materia Medica.
R. H. Bolton. H. G. N. Cooper.
Surgery, Medicine and Obstetrics.
J. H. Chitty.

SOCIETY OF APOTHECARIES OF LONDON.
July, 1930.
Anatomy.
E. Pugh Jones. J. G. Spiller.
Physiology.
T. Morgan. S. E. Roberts.
E. Pugh Jones. J. G. Spiller.

Appointments

Major H. J. Bensted to be Assistant Professor at the Royal Army Medical College.

Lieut.-Col. A. C. H. Gray, O.B.E., relinquishes the appointment of Professor at the Royal Army Medical College.

Surgeon-Commander F. C. Hunot to H.M.H.S. *Maine.*

Change of Address

N. A. Goudge, L.D.S., 79, Harley Street, W.1. *Welbeck* 7476.

Sir W. Arbuthnot Lane, 29, Portland Place, W.1. *Langham* 2712.

Dr. J. K. Milward, "Penshurst," Watling Street, Redlett, Herts. *Redlett* 414.

J. C. T. Tregarthen, M.R.C.S., L.R.C.P., Beaufort, via Jesselton, B.N. Borneo.

Births

ALLEN—On July 10th, 1930, to Nancy (nee Keane), wife of N. Howard Allen, a son.

BOWEN-JONES—On June 25th, 1930, at "Northleach," Cheltenham, Glos., to Margaret, wife of Dr. E. Bowen-Jones, a son.

MILL—On July 16th, 1930, at 3, Wilbraham Place, Sloane Street, S.W.1, to Nancy (née McKenzie), the wife of W. A. Mill, F.R.C.S., a daughter.

EDS. { J. B. B.
P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *9th August* 1930 — *Number* 1097

PASSIM

THERE was once a surgeon who was smitten with appendicitis. Being at once a conceited and a distrustful man, he decided to remove his own appendix under local anæsthesia. Halfway through the operation he fainted, and was found lying unconscious by his House Surgeon, who calmly washed up and completed the operation leaving a sponge inside.

Members of the medical profession may be divided into three classes as regards the subject of their own health. To the first class belong such as the surgeon quoted above, who adhere arrogantly to the slogan "If you want a thing done well, do it yourself." There is a second type, all too rare, the medical man who resigns himself absolutely to his fate, and faithfully emulates the lay patient. He lies in bed, only too thankful to get a fortnight's complete rest, only too glad that at last there is a case in which he is personally interested, yet which he is called upon neither to diagnose, treat, nor attempt to collect a fee. He belongs to the type—we repeat, all too rare—who does not get ileus after his appendicectomy, who does not vomit after his gastro-enterostomy, but who persists in preserving a clean, undisturbing wound, and a bright and cheerful face. His only disadvantage is that he goes away to sing your praises to his friends—most of them medical and belonging to that vast and unfortunate third group, comprising, won't you agree? about 80 per cent. of medical patients—the man who knows how he should be treated, suspects in advance his advisor's ignorance, and is too much of a gentleman to complain to anyone except his friends and relations.

This unfortunate type of medical patient works himself up into a frenzy of pathological introspection, which reveals itself unwittingly in his wild and suspecting eyes, as he views with askance, the grave horizontal nodding of his physician's head, the reactionary redness around his stitches, or the timid trepidation of his nurse's attentions. He it is who creates the appearance of what our correspondent writing on another page has described as "A Gap in the Curriculum" who develops the atmosphere of false and nervous heartiness, and who delays his own convalescence by placing too great a strain on his colleague's judgment, and by unhappily mating a slight degree of physical infirmity with a high degree of neurosis.

We have often wondered why so few wicket-keepers make good batsmen, seeing that they have so unique an opportunity of studying the bowling. It must be some such freakish lack of application which prevents doctors from being good patients.

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As the roof is about to be placed on the new Out-patient buildings, it comes to our ears that there are to be oft longed for improvements in that hard-worked department, the "Back Surgery."

Generations of Guy's men have struggled with the seething mob of 150 men in one small room, plying picric and wielding the knife, not always of razor-keenness, with no possibility of isolation of the patient from his fellows; similarly nurses have daily struggled next door.

In the Back Surgery now building, we understand that each patient will have his own cubicle and that all minor operations will take place in the seclusion of a Back Surgery theatre. Such accommodation would almost persuade us again to be junior dressers.

THE following appointments have been made :—

House Physicians—
To Dr. Poulton—Mr. H. G. McGregor.
To Dr. Ryle—Mr. S. Shone.

House-Surgeons—
To Mr. Fagge—Mr. D. B. Smallshaw.
To Mr. Turner—Mr. E. R. R. Mellon.

Obstetric Resident—
To Messrs. McNair and Cook—Mr. W. L. M. Bigby.

Throat and Ear House Surgeon—
To Mr. Layton—Mr. J. R. F. Popplewell.

Genito-Urinary and Orthopœdic House-Surgeon—
Mr. G. J. Hollis.

Opthalmic House-Surgeon—
Mr. L. K. Robson.

Out-Patient Officers—
Mr. H. J. Croot.
Mr. W. J. Ferguson.
Mr. J. M. Lees.
Mr. Stewart Harrison.

Assistant House-Surgeons—
To Mr. Hughes—Mr. P. V. Reading.
To Mr. Davies-Colley—Mr. R. F. Lomax.
To Mr. Bromley—Mr. R. A. Nash.
To Mr. Slesinger—Mr. R. W. Stephenson
To Mr. Ogilvie—Mr. E. H. Rink.

Delay in Surgery

A Clinical Lecture by Mr. W. H. Ogilvie

GENTLEMEN,—Most of us are so familiar with the dangers of delay in acute surgical conditions, that we run very little risk of falling into the error of procrastination. We have been taught to recognise the emergency that requires prompt action, to make our decisions quickly, and to carry them out expeditiously. It is not often, however, that we allow our minds to dwell on the reverse side of the picture; the advantage of delay. Yet it cannot be too strongly insisted that the first point a surgeon should consider is: whether any operation is required at all, whether "do nothing" is not the best advice in the interest of the patient. Operating has become so easy, and its implements and procedures so standardised, that most men when they leave hospital are quite capable of performing a large number of operations safely and well at a time when their surgical judgment is yet immature. With experience, the responsibility for deciding whether operation is the best form of treatment comes to assume first place; the choice of operation becomes a subsidiary question.

The last twenty years have seen many diseases and many parts of the body, which were formerly immune from surgical interference, brought within the scope of operation. They have also witnessed a general reconsideration of values. It has been realised that in many conditions where treatment by operation was formerly the rule, the resulting advantage which accrues to the patient is not enough to counterbalance the pain and the risk. The surgery of tuberculosis of bones and joints has almost disappeared during the period mentioned; that of tuberculosis of the cervical glands is fast following the same way. Large and heroic resections for advanced growths of the tongue and floor of the mouth are now rarely carried out. There is a general tendency in the surgery of cancer to realise that operation in late cases may often shorten rather than prolong the patient's life, and make the remaining period more, rather than less, unhappy.

But I do not wish to discuss the class of case in which operation is definitely to be abandoned, but to consider that larger group of conditions in which it is wise to stay our hand, either till it is clear that operation is the best treatment in the interest of the patient, or till the most favourable moment for operation has arrived.

1. *Delay may be necessary to establish a diagnosis.*

We all encounter cases, where symptoms and signs suggest a condition demanding operation, but where the diagnosis is not absolutely clear. In these circumstances it is often the wiser course to "wait and see," provided always that our waiting is active and not passive, and that we are prepared to see, not only the first signs pointing to a clearer understanding, but also the first indication that waiting cannot be safely prolonged. Time is the third dimension which gives perspective to the

clinical picture, and tells us how many factors which we observe are changing and interacting.

A small boy is brought up because he refuses to walk. The parent tells us that he went to bed well, but wakened early, crying with pain, and that, when put to the ground, he refused to bear weight on his right leg, or to use it in any way. The child's temperature is 102°, the pulse raised, and the face flushed, but he does not look ill. On examination, beyond moderate tenderness on handling the lower end of the right thigh, nothing can be made out. There is no redness, heat, or swelling, and the tenderness is not sharply localised. Jarring the leg through the sole of the foot is not resented. Osteomyelitis of the lower end of the femur is the most probable diagnosis, but, in the absence of more signs, it is wiser to withhold operation till the diagnosis can be more definitely established. Unnoticed trauma, sub-periosteal hæmorrhage in scurvy, or acute poliomyelitis, may often mimic an osteomyelitis very closely, and to operate on such conditions is bad surgery. Even when the diagnosis is a correct one, operation in an early and mild case of osteomyelitis may fail to discover the lesion ; pain and temperature persist till, a few days later, pus finds its way to the surface at a place outside the operation area. When we are dealing with a declared infective lesion in bone, the operation we carry out is limited to the diseased part, and treats that disease radically. We should operate as soon as we are faced with a certain, or even a presumably correct diagnosis ; before this, operation is apt to do more harm than good.

Again, we may be called to a young man who has been seized a few hours before with violent abdominal pain, and who has since been vomiting continuously. A meal had been taken shortly before, but no suspicious food can be traced. There is no hernia, nor can any cause for obstruction to the gut be detected. We may be dealing with an acute gastro-enteritis from some unsuspected article of diet, or with obstruction of the small intestine by a band, an internal hernia, or an impacted foreign body. Only waiting can clear up the diagnosis. An enema must be given, but some gas and fæcal matter will almost certainly be recovered with the first enema, and if improvement does not occur, a second will have to be given. The pulse rate must be recorded frequently, and the abdomen watched for visible peristalsis or increasing distension. Auscultation should also be practised, for the increased peristaltic action of the intestine can be detected by the ear earlier than by the eye or the hand. The decision is materially hastened by giving fluids by the mouth. If there is an obstruction, the vomiting will be made more insistent, but the diagnosis will be the more easily established. As long as we keep the more serious alternative uppermost, and postpone rather than abandon our diagnosis, we shall not jeopardise the patient's chances.

In occasional instances, the exact diagnosis of a tumour in the breast may be impossible when the patient is seen for the first time, and only by allowing an interval to elapse can we determine with certainty the nature of the tumour, and decide upon the appropriate treatment. Here, I know that I am treading upon dangerous ground. We are all familiar with cases of advanced cancer who tell us that several months before, when a small lump was first noticed, they were told that it was quite harmless, and that they were not to worry, but to come again if it got any larger. Every solid tumour in the breast in a woman over 20 must be presumed to be cancer, unless we have convincing proof that it is not so, and such proof is almost invariably microscopic. The cases in which delay is justifiable are very rare, and even there the diagnosis of cancer is postponed, and not abandoned, and waiting is anxious, purposive, and never prolonged beyond a fortnight. I will make my meaning clearer by relating two instances seen at surgical out-patients within the last six months.

A young woman of 28 had given birth to a child six months before, and had suckled it up to the time of attending hospital. A month earlier she had had some soreness round the right nipple, and this breast had begun to ache. After about a week, she noticed a lump in the breast which had slowly grown larger. Upon examination, the right breast was seen to be a little fuller than the left, but its contour was smooth and rounded. The nipple was not raised, retracted, or deviated. Upon feeling the breast, a smooth, rounded, solid, and very hard lump was felt in its upper half, about the size of a cricket ball, but flattened where it lay on the chest wall. The lump could be moved freely on the muscles. A few enlarged axillary glands were felt on both sides, but they were not hard ; both the lump and the glands appeared to be slightly tender. Here we had many of the characters of malignancy, but the unusually short history and the presence of tenderness suggested that we might be dealing with a subacute mastitis. The patient was therefore ordered to wean the child, to keep the breast warm and supported in a sling, and to report again in a week. At the second visit the physical characters of the tumour were unchanged ; had it been of infective origin, it would have shown signs, either of breaking down or of resolution. The take-in house-surgeon was therefore called, and admitted her at the end of his emergency week for a radical operation.

A woman of 55 came to out-patients with the story that a week before she had stumbled in her kitchen, and had struck the left side of her chest violently against the corner of the table. When she went to bed that night, she noticed a lump in the left breast. This had remained, and she had therefore come up for advice. On examination, it was seen that both breasts were of equal size, and the nipples were at the same level, but the lower arc of the left breast was outlined by a semi-circle of discoloured blood pigment. On feeling the breast, a hard lump about the size of a walnut, irregular in outline and firmly adherent to the skin, could be felt in its upper half, lying over the third intercostal space, and about three inches above the nipple. This woman was also told to support the breast with a bandage, and come again. In a week the lump was about half its former size. In a fortnight it had disappeared, but traces of bruising persisted below the breast for some weeks.

Lest it may be thought that alarm was needless in this last case, I should like to mention, for comparison, that of a woman of 60 sent up three years ago, by Dr. Robertson. This patient gave an almost identical history. The findings were similar, except that the lump was in the lower part of the breast, and surrounded by an area of extensive bruising. A week later, the bruising was less, but the lump remained unchanged, and operation was insisted upon. As soon as this old lady had consented to removal of the breast, she told a very different story. The lump had been present, not for a week, but for six months, and fearing that it was a cancer, she had gone to a herbalist, who had tried to disperse it by prolonged and violent kneading with his hands. Only when the whole area became discoloured had she come for surgical advice, but, fearful of operation, and ashamed of her earlier counsellor, she had invented the story of a blow.

2. *Delay may be advisable to allow us to observe the progress of an early lesion, where cure by other means than operation may be hoped for.*

Duodenal ulcer furnishes us with an excellent example of this type of case. When we are dealing with an early, though undoubted ulcer, operation should be postponed till really thorough medical treatment has been given a trial of at least six months. It has been established by subsequent laparotomy that a duodenal ulcer, treated medically before it has reached the chronic stage of a fibrous area involving all the coats of the intestine, may heal without leaving a scar visible to the naked eye. This result is infinitely better than that achieved by surgical treatment, good though this may be. Because of the hyperchlorhydria which always accompanies duodenal ulceration, a certain number of cases treated by surgical means show fresh ulceration at a later date, either in the line of the anastomosis. or in the jejunum. Another reason for delay is that at laparotomy it may be impossible to recognise an early ulcer of the duodenum either by inspection or by digital examination. Pannett records an instance of this difficulty. After a fruitless search, the abdomen was closed. A second operation was made necessary at a later date by the further progress of ulceration.

Another example I may bring forward is a lesion of a peripheral nerve, where there is complete interruption of conduction without anatomical loss of continuity, for instance, an ulnar paralysis following a blow on the arm. At least four months should elapse before the question of exploration is considered, during which time the arm is kept warm, the paralysed muscles relaxed and exercised by massage and galvanic stimulation, and the joints of the fingers moved daily. If at the end of this time any sign of recovery has become manifest, these measures should be continued for a further period. If recovery of conduction ensues, not only will an operation be avoided and time be saved, but the final result will be very much better than the partial success which follows resection and suture. The end results of operative repair of the median and ulnar nerves are very variable, but complete recovery of epicritic sensibility and of power in the intrinsic muscles of the hand is never obtained.

3. *In acute infections operation should often be delayed till localisation has occurred.*

Acute infections of the lymphatic tissues in the neck are common in infancy and childhood. In older children there is usually some septic focus, commonly in the tonsil, and one or two glands are enlarged, hot and tender, and may subsequently break down. In babies there is very often no recognisable lesion in the mouth or pharynx, while the infection in the neck is not clearly that of a definite gland, but involves all the surrounding tissues in a diffuse brawny induration which is extremely painful, but in which no fluctuation can be made out. If such a swelling is incised, the knife penetrates nothing but œdematous tissues. The natural barriers are as yet unformed, and operation may even hinder the localisation of the septic process by opening up fresh planes to the spread of infection. It is not possible to forecast which part of the mass will break down, and this may be some distance from the point at which the early swelling had provoked incision. Hot applications should therefore be persisted in till the diffuse swelling becomes more circumscribed, and the sense of fluctuation, or of a central elastic point in an

indurated area, indicates that pus has formed. Incision will then cut short the stage of resolution and hasten final healing.

In empyemata it is even more important to delay any operation till the infected effusion has been completely walled off from the surrounding pleura. If this process of localisation is incomplete, thoracotomy will allow the atmospheric pressure to break down such feeble barriers as have been formed, and convert an infected pleurisy into a complete pyopneumothorax. If an exploring needle withdraws creamy pus, we may safely infer the localisation has occurred, and drainage should be carried out. If only turbid fluid is withdrawn, aspiration should be carried out, and repeated at intervals till either the fluid is absorbed or till a change in the character of the exudate indicates that drainage may be safely performed.

4. *Delay is indicated in cases where, though operation is undoubtedly necessary, by waiting the optimum time can be chosen.*

Operations fall roughly into three categories: those for drainage, removal or repair. The two latter types of operation require for their satisfactory performance to be carried out through tissues which are at any rate viable, and as far as possible healthy. The processes of repair, whether called forth by injury or by infection, not only obscure anatomical landmarks, but adversely affect the purely mechanical qualities of the tissues, the material of surgical handicraft. Delay till the local conditions are favourable to operative procedures may be necessary in widely differing conditions.

While there is room for considerable differences of opinion about the general question of removing tuberculous cervical glands surgically, when these have broken down and become caseous, excision is nearly always necessary. This operation may, however, be one of the most difficult in surgery. No block dissection of malignant glands approaches in difficulty an operation for removal of a chain of matted tuberculous glands. The sterno-mastoid and all the fascial planes are infiltrated, so that there are no lines of natural cleavage; dissection is very largely in the dark, and it is almost impossible to avoid damage to the spinal accessory nerve or even to more important structures. A considerable degree of periadenitis, indicated clinically by fixation of the enlarged glands, is therefore a powerful argument for delay. This matting is very largely due to added septic infection, and not to the tuberculous process. A course of sea air, X-rays, or ultra-violet light, will usually get rid of the fixation and leave a chain of soft or fibrous glands, freely movable, which can be removed by clean dissection, giving a result satisfactory both from the point of view of cure, and of appearance. Should a single gland break down, and threaten to burst through the skin, this disaster can often be avoided by aspiration, repeated if necessary.

Traumatic aneurysm, a condition rare in civil life, but common enough in military surgery, again calls for delay. Here the disturbance of the tissues is due, not to infection, but to diffused blood. Shortly after the injury, all the structures in the affected part of the limb are stained, distorted, and actively engaged with the process of repair. The injured artery must be exposed among tissues whose vitality is poor, and it is usually necessary to apply the ligature at a considerable distance from the point of injury. The collateral circulation is not yet established, and the venous return hampered by the general engorgement of all tissues. Thus gangrene of the distal part of the limb is very possible. If the part is treated by rest, firm pressure, and cooling applications, the swelling will in the course of three weeks diminish to a well-localised, rounded pulsatile tumour. Ligature of the artery above and below can be carried out with ease, and with the knowledge that no complications need be feared.

When any reconstruction operation is contemplated on a bone or joint which has been involved in a compound fracture, or has been attacked by an infective process, we must delay, not only till all active inflammation has subsided, but till all organisms have presumably been destroyed by the tissues, a much more lengthy process. Indeed, it can never be assumed that pyogenic bacteria have disappeared from an infective focus in bone, however quiescent the process may appear to be on clinical grounds. It is common knowledge that they may remain in sclerosed bone as long as 60 years, and resume activity, when, for some reason, the local resistance of the tissues is lowered. If, therefore,we contemplate some such procedure as a bone grafting operation to replace part of the shaft of a long bone destroyed by a gun-shot injury, or an arthroplasty to restore movement to a joint ankylosed after a pyæmic infection, we allow a period of at least 18 months to elapse after all signs of infection, such as local pain, sinuses or pyrexia, have finally disappeared. Even so we are not safe, and not till we have satisfied ourselves by "provocative" treatment with diathermy and vigorous massage, that no flare up of the old infection is likely, may we undertake a plastic procedure which will only succeed under perfectly aseptic conditions.

In the case of a bone graft, the vitality of the transplanted bone may be adversely affected, not only by sepsis, but by a deficient blood supply in the bed in which it is to lie, by an inadequate or

unhealthy covering of skin, or by undue mechanical strain. The actual grafting must, therefore, in some instances, be preceded by months of careful preparation, by the correction of defects, the excision of all scar tissue, and the transplantation of flaps of healthy skin.

There are occasions in surgery where the advantages of delay are so nicely balanced by its dangers, that entirely opposite lines of action may be advocated by men of equal ability and sincerity. I refer particularly to the controversy which is at the present moment proceeding in this and other countries, about what has been called the delayed treatment of appendicitis. This problem has been tersely set down by Hey Groves as "third day appendicitis," a label that very aptly picks out its essential features. It is generally accepted that all undoubted cases of acute appendicitis seen during the first 48 hours should be operated upon immediately. At the other end of the scale there are many cases in which the symptoms and signs of what has been an acute attack are manifestly subsiding when the patient is first seen. Here again it is universally agreed that nothing should be done until the pain and tenderness and pyrexia have subsided, and that the appendix should be removed in a quiescent period. Operations of the first and second type have an average mortality of well under 1 per cent. It is about the treatment of the intermediate cases that opinion is divided, and such cases are usually seen between the third and fifth day of an attack. The time of easy and safe operating, when the disease is limited to the appendix, and when the tissues of the abdominal wall and cæcum are healthy, has slipped by; on the other hand the inflammatory process has by no means subsided: it still has latent powers of extension, and is held in check by barriers whose nature and power of resistance are unknown quantities. In such cases the policy of delay, usually associated with the names of two of its earliest and most able supporters, Sherren in this country, and Ochsner in America, is advised by many surgeons. I will not recapitulate all the arguments supporting such a policy, because you will find them very ably set forth in recent papers by McNeil Love and Hamilton Bailey, but would only point out that it is a line of action or rather of inaction which can only be carried out in a hospital, and which is admittedly dangerous unless the surgeon and his nurses are familiar with all the details of the method and alive to its dangers, and are prepared to operate at the first indication of its failure.

Speaking purely from the personal standpoint, I mistrust and fear this policy of delay, and only very rarely employ it in my own work. The expectant treatment may lead to resolution in the majority of cases of localised peritonitis and appendix abscess, but when it fails, the patient is faced with the need for an urgent operation carrying a mortality of at least 6 per cent. In the great majority of localised abscesses and cases of peritonitis I would urge immediate operation; I have always adopted this line in my own practice, and have had, as yet, little cause to regret it. There are, however, cases of appendicitis where the process of infection proceeds slowly, leading in the course of a week to the formation of a large mass in the right iliac fossa. The symptoms are at no time severe; the temperature and pulse are only slightly raised, and there are no indications of toxæmia. Operation in such cases is extremely difficult: little or no pus is found, but the appendix and cæcal wall are enormously thickened, œdematous and friable. The identification and freeing of the appendix is tedious. All tissues tear with the greatest readiness, and bleeding is profuse and controlled with difficulty. The stump of the appendix cannot be satisfactorily invaginated. The history of such a case after operation is unsatisfactory. Convalescence is apt to be marred by recurrent abscesses, secondary hæmorrhage, or the formation of a fæcal fistula, which, however, nearly always heals spontaneously. Portal pyæmia is always a danger after an operation of this nature, and, where it does occur, is usually fatal.

If such a condition can be recognised clinically, and it is not always easy, expectant treatment is the wisest policy. When the inflammatory condition has subsided, the removal of the appendix is a simple matter, and convalescence is uneventful. Should such a condition be found at operation, it is advisable to be content with laying a drain down to the inflammatory mass, and to perform appendicectomy when the parts have once more become normal.

In conclusion, I would stress the value and importance, under certain circumstances, of delay in diagnosis, or, to make my meaning more clear, delay is applying a label. We must, for the sake of our own souls, diagnose every case which we have had the opportunity to examine conscientiously. Such a diagnosis may be provisional, that is, we believe it to be as near the truth as the facts at our disposal will allow, but it must be a definite one in our minds, and not one of many alternatives. It is better to be certain than to be right, for men may rise on stepping stones of their dead diagnoses to higher things, but from the complacent swamp of vague alternatives no ascent is possible. On the other hand a diagnostic label, once applied to a case, is apt to stick to it permanently, to bias all further investigations concerning it, and to govern its treatment.

I will give one example only of the need for delay in making a final diagnosis. A girl of 12 is brought up to out-patients by her parents, because she has been limping for the last three weeks, and refuses to take part in games. She looks well, and her temperature and pulse are not raised. When she takes her clothes off and walks up and down the carpet, it is clear that she is walking with a right hip limp. Trendelenburg's test is positive on that side. There is moderate wasting of the right thigh muscles, and slight wasting of the calf muscles ; all movements of the hip joint are restricted in range. There is no fixed deformity and no shortening. The other joints, and the heart, are normal. The X-ray shows no disease in the acetabulum or upper end of the femur.

We can only diagnose the case as a subacute or chronic arthritis of the hip, and chronic arthritis of a single large joint in a child is almost synonymous with tuberculosis. But if we label it tuberculous arthritis, we have committed ourselves to immobilising the joint for a minimum period of two years. Perhaps after six weeks of such immobilisation full movement will have returned to the joint. We are now assailed by doubt—was the case one of tuberculous arthritis, or was it not ? If it was, she must remain immobilised even though she appears to be cured. In the end we are very apt to give the patient the benefit of the doubt, and to let her get up and run about. If the arthritis was really tuberculous, the disease will rapidly become worse, and will probably extend and cause bone destruction, so that all chance of recovery with a movable hip has been lost.

There is only one method of settling the nature of such a case, and that is by a period of observation during which the hip is rested but not immobilised. Some of these chronic joints are infected by the pneumococcus, others by a streptococcus of a low grade of virulence; in the majority no organism is ever isolated. But all non-tuberculous joints will lose their symptoms after a month in bed, whereas a tuberculous joint will improve under such conditions, but will not become free from symptoms unless it is also immobilised completely in a frame or a plaster spica. Thus by delaying our decision for a month, we may save the patient, if the diagnosis of tuberculosis be refuted, from two years of unnecessary restriction, if it be confirmed, from the risk attending inadequate treatment.

A Gap in the Curriculum

IT is a fact, not unworthy of note, that when an operation is performed on a member of the House or Junior Staff there is frequently an atmosphere in Theatres which is quite distinct from that found at any other time.

The normal relationship between patient and doctor is, on these occasions, much disturbed. There is a trace of levity about the proceedings with which the surgeon, the anæsthetist, the patient and the dressers, are all to some degree affected. Compared to the cold yet kindly attitude usually adopted in the operating theatre it may not be going too far to say that a little hilarity colours the occasion.

There are probably several factors concerned in the production of this state of affairs. In order to understand them it becomes necessary to analyse the atmosphere found on normal occasions, and when one considers this, it is seen that it depends on the whole fundamental principles of relationship between doctor and patient.

Present day medicine (including surgery) is not so far removed from the middle ages that it has entirely lost that air of mystery with which it was formerly enveloped. One may go further and say that not a little use is still made of this element of mystery in the art of healing to-day—not that this is to be deprecated, for your patient likes a little mystery, even your level-headed sort. In its exaggerated form it is seen, on the one hand, in the poorer patient's preference for a bottle of medicine made up by the doctor, and, on the other, in the richer patient's attitude to Abram's box. This may be called gullibility, faith, bluff, or the art of medicine, according to the point of view.

It should also be borne in mind that while occasionally the patient knows almost as well as the doctor what should be done under any given circumstances of ill-health, what he really wants is an opinion as to prognosis. On this point, however well informed he may be in regard to the others, he must rely entirely on his medical adviser, for it is a matter of shifting responsibility.

Whatever may be the attitude of patient to doctor when meeting socially—and this is frequently one of facetious scorn or friendly banter, and seldom that of admiration—nevertheless, when he meets his doctor via the waiting room, he takes this attitude off like an overcoat, and finds himself shivering in the cold of professional relationship. But when, as in the case under discussion, colleague meets colleague, there is no such overcoat to take off, except when a very junior colleague meets a very senior colleague, when the relationship is frequently that of normal patient and doctor. The attitude one might expect to be the same as that found in the College at lunch, or in the wards—disinterested, as one might discuss a cirrhotic liver

on a plate—and quite often an attempt is made to adopt this manner. Frequently, however, the surgeon calls the patient in to the consultation, partly, one supposes, out of deference to the patient's reputation, perhaps partly out of a slight, maybe transient, realisation of his own limitations, and in either case from a mistaken idea that the patient is in a position to know something about such things in other people.

The trouble depends on two misconceptions. First, that in dealing with a colleague there is no necessity for faith—that is, faith in the surgeon, as opposed to faith in surgery. Second, that the accused, even if he be a judge of good standing, should know what sort of sentence he should receive.

Perhaps it is because we have had insufficient experience in dealing with colleagues as patients that these things arise, and since we are robbed of our usual cloak of relationship we feel rather lost, and not knowing what attitude to adopt we cover our confusion with what appears to be a little levity, but what is really a little hysteria.

This is a part of our training which has been to some extent overlooked, and which we must learn as we can, when post-graduates. But as a help towards those who are anxious to study this matter, a few points may be mentioned :—

1. There is no necessity for any alteration in professional relationship ; rather should it be even more strictly enforced.

2. The patient is in even more need than the average sick person for the voice of authority.

3. He is even more anxious, did he but realise it, to shelve the responsibility of prognosis.

4. The surgeon, more often than not, is trying to hide a certain nervousness which he believes the patient is feeling ; the patient, on the other hand, flattering himself that the surgeon may be a little nervous on such an occasion, tries to help him out with an attempt at light-heartedness. In both cases it is an unnecessary expenditure of effort.

But perhaps, after all, what we really need is some instruction on how to be a patient.

N. L. L.

Some Exceptional Dental Cases

A Clinical Lecture by Mr. Arthur Bulleid

GENTLEMEN,—I have entitled my lecture this morning "Some exceptional cases," simply because that phrase, I think, fairly describes them. They are all cases which I have myself dealt with or been interested in.

Case 1.

This was a case in which I was called in by one of the dental surgeons to undertake some bacteriological work. The dental surgeon was extracting some upper teeth under local anæsthesia and resecting the outer alveolar plate in the anterior part of the mouth. Radiograms had been taken of the case and showed alveolar absorption and periodontal involvement. The bone itself appeared normal in structure in the films. The right upper canine was firm in its socket and the bone around seemed normal as far as the radiographic evidence was concerned. On extraction of the tooth the whole socket was found to consist of a "jelly-like" material which could readily be removed with a sharp excavator. Cultures from the jelly-like material gave a pure growth of streptococcus longus (var. viridans). The interesting point about this case was that the rarefaction of the socket of the right upper canine had shown no abnormality in its radiographic appearance and the tooth itself was quite firm.

Case 2.

This was a case I saw in Constantinople during the latter part of the war after the Armistice. A girl about fourteen years old had been brought in to see me by one of the natives attached to the hospital in which I was at the time. The patient had a perforation of the cheek in the region of the last molar tooth. The only history I could obtain was rather scrappy owing to the "language" difficulty, but as far as I could make out there had been a history six months previously of "sore throat" and sore gums. No treatment had been given at the time and gradually the condition had cleared up except in one spot on the inner side of the right cheek where an ulcer had persisted. This ulcer had apparently eaten right through the cheek and there was a definite hole when I saw the patient. Smears were made from the edges of the perforation and a typical picture of Vincent's angina was revealed. The interesting point about this case was that the untreated Vincent's infection had been sufficiently severe to produce an ulcer which had finally perforated the cheek. I was never able to ascertain if the primary lesion was in the throat or gums, but the cheek ulcer was undoubtedly produced by spread of infection on to the cheek from the gums in the region of the right lower molars.

CASE 3.

This was a case of phlebitis and thrombosis in, I believe, the right leg, in which there was a history of a blow on the ankle. It did not permanently clear up, and to cut a long story short the patient was sent to one of the dental surgeons who had the teeth X-rayed. All the teeth were "live" teeth, but a first right upper premolar showed an "absorbed" apex. This was extracted and for a short period the phlebitis and thrombosis disappeared. It returned in a few months and again the patient was seen by the dental surgeon and again X-ray evidence revealed the absorption of the apices of two live premolar teeth in the upper jaw. This absorption had taken place since the extraction of the original premolar tooth as the X-ray films showed. It was decided to remove all the remaining upper teeth and this was done under intra-tracheal anæsthesia. Before any extractions were carried out the gum and periosteum over the 5 / 5, *i.e.*, the teeth with the absorbed apices, were reflected and a large sterile "burr" was inserted through the outer alveolar plate into the periapical regions of the respective teeth, and cultures were put up both aerobically and anaerobically, the former into nutrient broth and the latter into meat broth. The two premolars were then extracted with asceptic precautions and again cultures were put up aerobically and anaerobically as before. In all cases a streptococcus of the viridans type was recovered in the cultures and this streptococcus agglutinated with the patient's serum up to a dilution of 1/640. The remainder of the upper teeth were then extracted at the one sitting.

The patient was given a three months' course of vaccine therapy with his own streptococcus, and as far as I know there has been no return of the phlebitis and thrombosis in the last eighteen months The interesting point about this case was that the infecting organisms which must have entered the body at the time of the ankle injury were carried in the blood-stream to a tissue of lowered resistance and settled there. In this case the secondary focus of infection was undoubtedly the teeth, which showed the absorbed apices and which, as the primary focus had long since healed, had therefore become of prime importance. Removal of this focus coupled with subsequent vaccination brought about the desired result.

CASE 4.

This was a case of a small infant of about a year in whom none of the upper teeth had erupted, but who presented dark red masses of tissue extending all along the gum of the upper jaw. Under a general anæsthetic this mass was excised and for a short time the hæmorrhage was profuse, but was controlled by a few stitches. Microscopical examination of the mass showed it to be an angioma. Within a fortnight eruption of the teeth had commenced and went on uneventfully. The interesting point about this case was that all the upper teeth were prevented from erupting because of the condition described.

CASE 5.

This was a case of a patient who had two lower molar roots removed under a mandibular local anæsthetic. The history was, that some years before this particular molar tooth had been broken during an attempted extraction, and the roots left behind. For some six years there had been no trouble, but suddenly the patient experienced some pain around them. X-ray films showed that the roots were lying in very sclerosed bone. They were removed surgically and within 48 hours the patient complained of severe pain and a hard swelling was noticed in the buccal sulcus in the molar region. The pain persisted and it was suggested that there was abscess formation. An incision was made into the hard mass which turned out to be merely hard œdema and no pus was discovered. Cultures were put up and a practically pure growth of a streptococcus of the viridans type recovered.

Frequent mouth washes were given and sedatives and aperients prescribed by the medical attendant. In about a fortnight the condition cleared up. The interesting point about the case is that there was no pus formation, and the hard swelling was merely the products of the inflammation. Such cases are almost invariably streptococcal, and operative interference is contra-indicated. The excessive pain complained of was probably due to the sclerosis of the bone from which the roots were removed.

CASE 6.

This was a most distressing case of a boy who had a left lower first premolar tooth extracted and who subsequently developed a staphylococcal septicæmia from which he died.

The history was, that the patient had the premolar tooth extracted under gas anæsthesia without difficulty. In twenty-four hours the jaw became swollen and the swelling gradually increased. The doctor incised the swelling from the outside in two places, but no pus was discovered, though at the time it was thought that a little sero-pus had been evacuated. No improvement in the boy's condition followed and the temperature went up and did not subside, and he continued to run a high swinging pyrexia. The periosteum of the jaw was stripped up from beyond the symphisis on the right side and right along the ascending ramus of

the left side of the mandible. No pus was at any time present. Blood cultures gave a copious growth of a hæmolytic staphylococcus aureus and a week after the extraction of the tooth the boy died. A staphylococcal septicæmia with fatal results must be most uncommon after a dental extraction. It is almost impossible to state where the organism originally came from ; it might have been present on the apex of the extracted tooth, or it might have been present in the mouth, or again it might have got in from the skin. The diagnosis of staphylococcal septicæmia was not made until the blood culture was positive.

Clinically, the absence of pus, the relatively rapid pulse, the slight glossitis and the absence of metastatic abscesses pointed to a streptococcal rather than a staphylococcal infection.

These few cases, I think, fully deserve the title "exceptional" and tend to show that even in dental practice the unexpected does occasionally turn up.

Appointments

DENTAL SCHOOL.

THE following appointments and re-appointments have been made by the School Council for the year commencing October 1st, 1930:—

Dental Tutor and Supervisor—
Mr. H. H. Kenshole.

Registrars in the Dental Department for Children—
Mr. R. E. Rix.
Mr. R. Cutler.

Assistant Anæsthetists to the Dental School—
Mr. E. R. Bailey.
Mr. E. R. Boland.
Mr. R. Cutler.
Mr. R. Jarman.
Mr. H. H. Kenshole.
Mr. R. E. Rix.
Mr. B. R. Medlycott.

Demonstrators of Dental Prosthetics—
Mr. D. S. Clogg.
Mr. H. A. Rushton.
Mr. L. P. Tupling.

Demonstrators of Operative Dental Surgery—
Morning Attendance—
Mr. W. E. Herbert.
Mr. K. S. Keele.
Mr. F. S. Warner.
Mr. C. L. Stevens.
Afternoon Attendance—
Mr. H. P. Baylis.

Found in the Colonnade

(Dropped from a Light Student's loose-leaf note book)

A CASE OF FAINTING IN THE RADIANT HEAT BATH.

Causes.—

1. Excessive heat.—Mrs. Grundy's appointment clashes with Mrs. Leek's.

2. Lack of oxygen.—Loss of elastic traction of the lungs due to emphatic details of "arthroid rheumatism," and seven operations undergone.

3. Patient inclined to be thick-headed ; too little blood to the part.

Symptoms.—

1. Tingling sensation due to vibration of mighty atoms (+ and —), these are thrown into a state of panic according to Ohm's Law (survival of the fittest).

2. Gradual loss of speech.

3. Sudden loss of vitality.

Prognosis.—Bad. In spite of careful attention subsequent attacks occur.

Treatment.—Put on a clean overall and immediately report to Sister. Give the patient's name and address, onset and brief history of the disease, and muscle reactions to galvanism and faradism, stating whether A.C.C. is greater than K.C.C.

Prepare a cubicle with a good light and pleasant aspect (Dental School) ; draw the curtains to avoid a crowd, and carefully arrange pillows and warm blankets on a *leather* plinth to ensure isolation from earth.

Have ready all possible and impossible apparatus as the doctor may want both ; also bandages, straps and sandbags, with which to fix the patient.

Switch off all lights and remove the patient from the bath ; apply the usual restoratives followed by movements to increase the blood to the head (bunny-jump down inclined form, sudden anatomy, test, etc.).

3rd. day.—Progress to one foot in a bath, and a pad on the vertex of the skull.

4th day.—Add graduated contraptions to quadriceps, and replace posterior cock-up by anterior wash-down splint.

A course of twelve treatments is usually enough.

J. P. D.

Massage School News

THE results in the recent examination of the Chartered Society of Massage and Medical Gymnastics were very satisfactory. The following Students passed:—

CONJOINT.

V. R. Candy	E. D. Nuding
M. E. Carter	E. J. K. Scarf
W. V. Ellis	E. C. Usher
A. R. Harrison	D. Whittington
V. N. Leverton	F. A. G. Wilkinson

(These have completed the Examination.)

PART I—*Anatomy.*

B. W. Candy	C. M. Price
M. A. Cowing	M. E. Rix
I. D. Davidson	J. G. Swanson
D. F. Farr	H. P. N. Sears
K. M. Ogilvie	J. Wingrave

In spite of the many subjects to be studied in the training for massage and remedial exercises, the massage students also find time to play games.

During the winter some enjoyable matches in lacrosse, hockey and netball, have been played with varying success.

The most recent netball matches were against the Nurses in the Preliminary Training School. They have taken up netball in real earnest and have a very good team.

In the first match the Massage School was badly beaten, but in the return match did somewhat better. The scores were 24 to 10 and 28 to 22 respectively.

The nurses' success was mainly due to the skill of their shooters.

The massage team this year consisted of the Misses Wilkinson, Nash, Arnold, Robinson, Foote, Farr and Price.

In tennis the results of matches are rather better; the match against St. Thomas's Hospital Massage School was lost, but that against King's College Hospital Massage School was won. The score in games at these two matches was 104-58 and 28-22.

The winning team consisted of the Misses Oppenheim, Tennyson-Smith, Paul and Riley.

A school knockout tournament is in progress and has reached the second round.

Swimming has been added to the school curriculum, and the visits to the baths prove very acceptable this weather. Everybody is practising strenuously as there are several matches in prospect and the competition for the Hogg Cup is fixed for early October. This is to be more difficult this year as it is to consist of several events instead of the usual team race. Points are to be given for the various events so that the teams must be good all round, and not only speedy swimmers. Teams are entered for the Cup by the Nursing and Administrative Staffs and the Electrical and Massage Schools.

The first swimming match of the season was on Wednesday, July 16th, against Croham Hurst School, Croydon.

The match was swum in the Guy's Baths, and the visitors were successful, winning by 75 points to 69.

Correspondence

History of Anæsthesia

To the Editor of the GAZETTE.

SIR,—The history of anæsthesia is of abiding interest to those of us who practice this branch of medicine, and Dr. Jarman deserves the thanks of the readers of the *Gazette* for recapitulating in your issue of July 26th, the chief facts and dates which relate to this subject. I hope however, he will not mind my drawing his attention to an error in his account of Hickman's experiments in which he states that Hickman used N_2O. I know that he has high medical authority for his statement, but it is, unfortunately, not accurate, as all the experiments were conducted either with CO_2 or by excluding air. A full account of all the documents dealing with Hickman's life and his work has been given in a little volume which was published by the Wellcome Historical Medical Museum at the time of the celebration of the Hickman Centenary.

Dr. Jarman's reference to mandragora is of much interest. A passage in the Book of Genesis shows that the mandrake was considered of great importance in early times.

There are many other points in his paper which I should like to discuss but space prevents me from doing this. I should, however, like to say that I hope that none of your readers will conclude on seeing the words "following on the work by Sir Francis Shipway, there is Avertin," that I discovered this drug, or was responsible for the scientific and clinical investigations which preceded its introduction to this country.

Yours, etc.,

FRANCIS E. SHIPWAY.

55, York Terrace, N.W.1.

Treatment by Heliotherapy

To the Editor of the GAZETTE.

SIR,—In his letter on treatment by heliotherapy, Mr. Layton has evidently forgotten, or does not know of the work done by the late Mr. J. G. Saner in 1914, when he was resident surgical officer.

Dr. Rollier had been over in England and, as a result of what he said, Mr. Saner determined to try the effect of sunlight at Guy's. The shed which is now on Patience balcony was erected for this purpose, and as far as possible, the treatment carried on at Leysin was imitated.

I do not think Mr. Saner published the results of his investigations and I have not been able to refer to the cases, but I believe that he was much pleased with the success of the treatment. One case in particular, an advanced tubercular disease of the hip, seemed to respond to the treatment in a remarkable way.

Two special points struck me. The first was that bronzing was produced in winter to a very marked extent, even when there had been no direct sunlight for weeks, and the second was that patients appeared to do equally well in winter as in summer.

Everyone will congratulate Mr. Layton in the way he has been able to overcome the difficulties he has met in carrying out this form of treatment.

Yours, etc.,
C. E. IREDELL.

38, Harley Street, W.1.

Odontological Specimens

To the Editor of the GAZETTE.

SIR,—I have received from Mr. W. A. Maggs the following specimens for the Odontological Section of the Museum:—

1. Jaws of a Tetrodon.
2. Jaws of Sargus Ovis,
3. Jaw of Pike.
4. Specimens (2) of two lower second molars with distal absorption cavities due to impaction of the third molar.
5. Specimen of premolar tooth with marked staining of the tissues by copper amalgam.

I would be glad if I might acknowledge these specimens in the *Gazette*.

Yours, etc.,
G. H. PRITCHARD.

18, Portland Place, W.1.

Reviews

Guy's Hospital Reports, April, 1930. Vol. 80. No. 2. Edited by A. F. HURST, M.D. Published by The Lancet. *Price* 12*s*. 6*d*.

THE April number of the Reports is mainly given over to a series of papers concerned with staphylococcal infections.

The first article is an appreciation of Sir Alfred Fripp by Sir William Hale-White. Enthusiasm and thoroughness, two essential criteria for success were abundantly his, and in addition he possessed a flair for organisation. The personal interest that he took in his patients was a very pleasant characteristic.

Dr. Ryle provides a most interesting paper on staphylococcal fever. Case histories are given and differential diagnosis is discussed. The essential simplicity of the treatment, which may be summarised as good nursing, copious fluids and the timely liberation of pus, is refreshing. In spite of this and of the comparatively hopeful prognosis given, one is impressed by the necessity for judgment and experience in dealing with these cases.

Dr. H. W. Barber contributes a paper on staphylococcal infection of the skin. He gives a detailed account of the types of lesion, the organisms concerned and their methods of invasion. He lays stress on the loss of antibacterial function of the skin, a condition expedited by lack of a supply of cool air and sunlight, and particularly in those of seborrhœic diathesis. The principles of treatment, both local and general, are fully discussed. The rationale of intra-cutaneous vaccine is explained.

Mr. Joyce contributes an instructive analytical account of staphylococcal renal disease based on a series of cases. The imposition of streptococcal infection on a primarily staphylococcal lesion with fatal result is an interesting anomaly. He describes how a staphylococcal lesion may persist for many years in modest silence while it causes a progressive extinction of the renal tissue. Spontaneous recovery may occur.

Dr. Hugh Barber describes a case of perinephric abscess of insidious onset, with a normal urine, which made a satisfactory recovery after incision and drainage. Another case of perinephric abscess, this time of two years' duration, is reported by W. J. Cotton, and well illustrates the difficulty which may be experienced in diagnosis. This case had attended the orthopædic and tuberculosis department of a general hospital before the correct diagnosis was achieved.

Dr. Venables describes two cases of secondary anæmia due to infection of the gall bladder with a hæmolytic staphylococcus. Dr. Witts includes two cases of Addison's anæmia complicated by staphylococcal septicæmia. He concludes that sepsis appears to inhibit the beneficial effect of liver in these cases.

Dr. Knott describes a technique for observing the phagocytic powers of leucocytes. Myelocytes and immature polymorphs are not phagocytic.

Dr. Venables gives a full account of the pathogenesis of anorexia nervosa, and discusses the treatment of nine cases. All were cured.

Mr. Bromley discusses a case of gastro-jejunal ulceration, which followed immediately after gastro-jejunostomy performed for duodenal ulcer. It was revealed by a second operation nineteen days after the first. The original anatomy was restored and the patient was free from symptoms two months later.

Dr. George Syllaba finds that ingestion of saccharine causes a rise in blood sugar level and basal metabolic rate, and considers this to be due in part to a conditioned reflex.

Mr. Bromley describes an operation of cordotomy carried out on a man suffering from severe pain, referred to the phantom arm after an amputation. His symptoms were completely relieved.

H. G. MacGregor gives an interesting account of a case of pellagra, accompanied by a series of excellent photographs.

In a short article Dr. Hurst describes two cases, each with a family history of Addison's anæmia, both of whom had achlorhydria. One of these individuals, whose only symptoms were a slight diarrhœa and soreness of tongue, showed megalocytosis and a slight anæmia, with a negative Van den Bergh reaction. With the continued use of hydrochloric acid, and later liver, she has kept free from symptoms. The other case showed a polymorphonuclear leucopænia as the only abnormal feature of her blood picture. She failed to follow out the prophyllactic measures advised, and a year later was found to be suffering from typical Addison's anæmia.

Finally there is an interesting account of a series of cases illustrating the condition of familial eosinophilia by Dr. Armand Delille, Dr. Hurst and Mr. Sorapure.

The Treatment of Chronic Arthritis. By A. H. Douthwaite, M.D., F.R.C.P. Published by Jonathan Cape. *Price 5s.*

THE object of the Modern Treatment series is to provide the general practitioner with information about special branches of medicine and surgery, the latest views on ætiology and treatment. Dr. Douthwaite's book admirably fulfils this purpose.

The theories of causation, and the underlying pathology of the various types of arthritis are broadly outlined. There is just enough to arouse the interest and enthusiasm of the reader. One feels one would like to know more, and this, by itself, makes the book worth reading. The chapters on treatment are more detailed and should be very useful to anyone who has to deal with this type of case. The diet sheet, appended for the use of the overweight osteo-arthritic, is the kind of simple thing that it is important for one to know, but which books on treatment pass by with a lofty disregard.

Spa treatment is robbed of its mystery and applauded for its disciplinary regime and suggestive effects in addition to the benefit desired in these cases from the ingestion of large quantities of water. The value of hot air baths, steam baths, and wax is discussed. The use of massage, splints and manipulation are likewise explained. Finally, there is a useful section on that standby of the examiner, gout.

Sport

Golf

Golfing Society

ON Tuesday, June 3rd, the Hospital were defeated in the Final of the Inter-Hospitals Competition, by St. Thomas's Hospital (holders), by 8 matches to four. This is the first occasion that the Hospital has reached the Final.

All matches were of course played level, and by comparing the handicaps of both sides it will be seen that the team gave a very good account of itself.

The match itself was played at West Hill—a long and difficult course, the bogey for which is 77. In spite of heavy rain for the two days preceding the match the course was in excellent condition, the greens being fast, yet soft enough to hold the long pitch shot.

The singles were played off first and space does not permit of a detailed account of every game, but it is worth mentioning that W. Lewis was once more 2 up and 5 to play against J. Robinson, and once again lost. He was not driving at all well, and on a course like West Hill, where every loose shot is heavily punished, it means that his approaching and putting must have been nearly faultless.

For St. Thomas's probably H. M. Yardley played the best game, his score being 74 for the morning round, so it is not surprising that H. Cameron failed to get his match further than the 14th green. D. R. Steen, who beat W. Mountain, was producing fireworks worthy of any golfer; he very nearly holed out for a one at the 13th (134 yards) and his putting was irreproachable.

In the afternoon the foresomes were played. H. Yardley and his partner repeated the morning score of 74 and so won the match for St. Thomas's, who only required one foursome to win. The most exciting finish was seen in the Lomax and Lewis *v.* Robinson and Steen match; the Hospital pair were 2 up and 3 to play, but at the 16th Lewis failed with his approach. At the 17th (503 yards) Lomax holed a putt for a "birdie" 4, but Steen saved the match by holing out from the edge of the green. At the 18th it was Lomax who failed with the easiest of chip shots over a bunker, and so the match went to the 19th. This hole (bogey's) is slightly dogleg, and Lewis placed his drive so well that Lomax had a comparatively easy approach to the green. Robinson and Steen were, however, involved in pine trees and heather, and so lost the hole and the match.

The individual results were :—

Lewis	(2)	0	Robinson (Scr.)	1 up	1
Cameron	(4)	0	Yardley (3)	5 & 4	1
Thornton	(4)	0	Nutt (3)	6 & 4	1
Lomax	(8)	0	Harper (3)	2 up	1
Mountain	(9)	0	Steen (5)	5 & 4	1
Gaffney	(8)	0	Albury (7)	3 & 1	1
Cotton	(9)	2 & 1	1 Clayton (7)		0
Pilcher	(11)	2 & 1	1 Light (9)		0
	Total	2		Total	6

W. Lewis, P. H. Lomax	at the 19th	1	J. N. Robinson, D. R. Steen		0
H. Cameron, W. J. Cotton		0	H.M.Yardley, M. Albury	5 & 4	1
H.B.Thornton, W. Mountain		0	R. Nutt, E. H. Harper	(5 & 4)	1
M. B. Pilcher, K. Gaffney	2 up	1	L. G. Clayton, L. H. Light		0

Staff v. Medical Students

ON Wednesday, July 2nd, a side drawn from the Medical Students of the Hospital played the Staff at Golf. Due entirely to the kindness of Mr. Bromley, this match was played at Sunningdale, and in spite of the fact that Mr. Bromley was himself unable to play (a fact greatly regretted by both sides), the result was an overwhelming victory for the Staff.

None the less, the match was most enjoyable, and we should like to thank those members of the Staff who played for giving up so much of their time and thus helping to make the day a great success.

The results were as follows :—

Mr. Morgan	0	Lewis (2 & 1)	1
Dr. Knott (4 & 3)	1	Lomax	0
Dr. Cameron (6 & 5)	1	Cotton	0
Mr. J. Croot (3 & 2)	1	Doran	0
Mr. Davies-Colley	0	Stoneham (2 up)	1
Prof. Johnston	½	Lomax	½
Dr. Marshall (8 & 7)	1	Wood	0
Dr. Dowling (8 & 7)	1	Howell	0
Mr. Mollison	0	Southam (3 & 2)	1
Dr. Scott	½	Scorer	½
Total	6	Total	4

Mr. Morgan, Dr. Knott		0	Lewis (4 & 2), Lomax	1
Dr. Marshall, Dr. Scott	1 up	1	Scorer, Wood	0
Mr. Davies Colley, Prof. Johnston	(4 & 3)	1	R. F. Lomax, Stoneham	0
Dr. Cameron, Mr. Mollison	(5 & 3)	1	Cotton, S. Southam	0
Dr. Dowling, Mr. J. Croot	(3 & 2)	1	K. Doran	0
Mr. Chapple (6 & 4)		1	Howell	0
	Total	5	Total	1

Total 11 Matches to 5.

Guy's Hospital Gazette

(ESTABLISHED 1872)

Published on Alternate Saturdays. Price 9d.

Editorial and Publishing Office :—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, **12s. 6d.** Post Free, payable in advance.

A Journal of Hospital News, Medicine, Surgery and Dentistry.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Hospital Information, etc.

Pass Lists

CONJOINT BOARD,
R.C.P. (London) and R.C.S. (Eng.)
July, 1930.

PREMEDICAL EXAMINATION.

Chemistry and Physics.

*R. H. C. Ballanff
E. A. Beach
C. M. Beales
L. J. Blay
H. C. Davis
*B. J. Doran
C. B. G. Elstob
†H. C. French
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R. H. Rutterford.
*K. L. Scott
†F. J. R. Stoneham
†E. A. Williams

*Chemistry only. †Physics only. ‡Elem. Biology only.

FIRST EXAMINATION.

PART I.

Anatomy and Physiology.

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W. B. Clegg
L. Z. Cosin
†E. E. Evans
†A. E. Ginn
*T. Ireland
*J. B. Jordaan
†W. S. Noble
P. S. Norris
H. D. Robinson
C. W. T. Shuttleworth
I. K. Thomas
*M. L. Walt
I. D. Williams.

*Anatomy only. †Physiology only.

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J. B. Frumin
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I. A. MacDougall
S. Paul
V. T. Powell
G. R. C. Rayner
L. G. Yendoll

FINAL EXAMINATION.

PART I.

Pathology.

H. Bloom
D. Erskine
H. N. Garrus
A. C. Hauptfleisch
M. Kosloff
S. B. Lange
G. F. Lashmore
E. L. Monkhouse
R. O. Payne
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*J. C. de V. Hutchinson
E. Lethem
*R. F. Lomax
*H. O. Lyne
*R. B. Peckham
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*J. M. Robertson
*L. K. Robson
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A. R. Clarke
*L. S. Davies
T. F. Davies
K. Harris
A. C. Hauptfleisch
G. Holroyd
D. W. James
A. J. D. Lewis
G. A. M. Lintott
*R. F. Lomax
E. L. Monkhouse
M. J. O'Donnell
J. W. Oliver
J. Rosenberg
R. N. C. Smith
K. S. Southam

DIPLOMA IN OPHTHALMIC MEDICINE AND SURGERY.

T. S. Blacklidge D. K. Weston

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE.

F. Marsh S. E. Theis.

DIPLOMA IN PUBLIC HEALTH.

E. R. Boland.

LONDON UNIVERSITY.
SECOND EXAMINATION FOR MEDICAL DEGREES.
July, 1930.

PART II.

I. A. Cathie
D. J. Clarke
L. R. L. Edwards
A. E. Jones
M. J. Lindsey
P. S. Norris
D. W. C. Northfield
W. L. Ogle
L. C. Oliver
V. B. Reckitt
J. E. Rowlands
D. B. Smallshaw
L. Stoll
J. Tudor
R. S. Vine
E. C. Zorab

M.D. EXAMINATION.
July, 1930.

PART I.

Medicine.

C. W. Marshall

PART IV.

Midwifery.

W. M. Brown E. H. Roche E. E. D. Gray

PART VI.

Tropical Medicine.

F. Marsh

SECOND EXAMINATION IN DENTAL SURGERY.

H. B. Smith.

FOURTH EXAMINATION IN DENTAL SURGERY.

A. R. F. Thompson

SOCIETY OF APOTHECARIES OF LONDON.
July, 1930.

Medicine.

*S. R. G. Pimm *A. L. Thomas

*Now qualified.

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A. F. Hurst. On some common disorders not commonly diagnosed, *Clin. J.*, lix, 301.

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W. M. Mollison. A mastoid wound retractor (invention), *Lancet*, 1930, i, 1410.

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L. A. Parry. An action for malpraxis in 1805, *Lancet*, 1930, i, 1437.

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—Five cases in which Wilde's incision was successfully performed for retro-aural swelling. Case showing danger of not performing a mastoid operation if ear discharge persists after a Wilde's incision, *Proc. R.S.M.*, xxiii, 1379.

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A. A. Osman and H. G. Close. Acidosis and debility, *Quar. J. Med.*, xxiii, 393.

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C. Worster-Drought and others. Endothelioma of the cauda equina, *Brit. J. Surg.*, xviii, 6.

Notice

CHARLES OLDHAM PRIZE FOR OPHTHALMOLOGY, 1930.

The following award has been made:—

Chamberlain, Jack. *Prize.*

HILTON PRIZE FOR DISSECTIONS, July, 1930.

The following awards have been made:—

Prize—

Pryn, E. J.

Certificates—

Howell, T. E. McArthur, J. B. H.
McArthur, J. M. Wass, S. H.

Appointments

W. E. Berwick, M.B.E., L.D.S., to be Honorary Dental Surgeon, Royal Hospital, Richmond.

ARMY DENTAL CORPS.

Captain J. L. Garrard to be Major.

R. NAVAL MEDICAL SERVICE.

Surg. Lieut.-Commander A. W. Cocking, to be Surgeon-Commander.

Change of Address

H. C. C. Taylor, M.D., 44, Friar Gate, Derby. *Derby* 2079.

S. V. White, L.D.S., "Carisbrooke," 99, King's Road, Westcliff-on-Sea. *Leigh-on-Sea* 7352.

A. L. Wraight, L.D.S., "Roylands," 39, Pelham Road, Gravesend.

Births

DOWELL—On 2nd August, 1930, at the Royal Infirmary, Derby, to Babs (née Dommen), wife of William H. Dowell—a son.

DURRANS—On Aug. 5th, 1930, at Cornelia Hospital, Poole, Dorset, to Margaret Durrans, wife of S. F. Durrans, M.R.C.S., L.R.C.P., a son.

Marriages

SUNDERLAND—RONALD. On 24th July, at the Parish Church, Hampton-on-Thames, Middlesex, by the Rev. E. C. Charles, M.A., Verney L. Sunderland, L.D.S., R.C.S. (Eng.), elder son of Mr. and Mrs. W. Sunderland, of Driffield, Yorks, to Jean Ronald, younger daughter of Mr. H. and the late Mrs. Ronald, of Hampton, Middlesex.

TAYLOR—BOAM. On 11th July, 1930, at the Cathedral, Derby, H. C. C. Taylor, M.D. (Lond.), to Kathleen, daughter of Mrs. W. Allan Reid, of Derby.

Death

TOMLYN—Michael Douthwaite Tomlyn, Buckhurst Lodge, Sevenoaks, died Sunday, 13th July, 1930, aged 24 years.

EDS. { J. B. B.
P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *23rd August* 1930 *Number* 1098

PASSIM

PERHAPS it is because we have an inherent taste for chipping our superiors, especially when we can honestly feel that the rebuke is deserved; perhaps, on the other hand, it is a sense of self-suspected but unconfirmed guilt—a feeling difficult to describe but none-the-less embarrassing to experience—perhaps, after all, it is merely a sense of righteous indignation, a defence of the poor ignorant-but-willing-to-learn-even-if-he-has-to-ask-stupid-questions student against the omniscient though haughtily casual conductor of Out-Patient Departments. Without doubt, it is one of these motives which prompts us to raise a discreet hand to hide the an-æsthetic picture of an asymmetric editorial tongue in the cheek when we read the letter published elsewhere from "Ex-Dresser" on the subject of P.R.D. cards.

A ward clerk, potentially intelligent but practically unimaginative, once asked an Assistant Surgeon at Out-Patients what P.R.D. stood for. The reply was "Perfectly Rotten Dresser." Perhaps the reply was descriptive—it very often is; but we cannot suspect the founders of tradition at this Hospital of such unkind cynicism; we can only assume that the meaning is far more prosaic, though apparently less appreciated—"Please Return Diagnosis."

There are some members of the Staff—and we note that our correspondent mentions Thursday mornings—who teach that there are only two important essentials in the examination of a case at Out-Patients, to do an R.E. and to reply to the P.R.D. card; there are others who just send for the Take-In H.S. immediately. Both these attitudes have points in their favour, but if the members of the Staff could only visualise the excitement in the Surgery when the cards come back; if they could only interpret that apparently grossly unwarranted look of self-satisfaction which occasionally overtakes a dresser when he could—if you asked him—produce from his inner pocket written proof of his ability to diagnose a sebaceous cyst—then they would, we feel sure, help to raise the percentage of P.R.D. card returns to 100.

Even a scathing reply on a card will give amusement—to the victim's fellow dressers.

▭

THREE months ago Passim stated that the Residents went off unusually quietly. The editor subsequently met with much criticism, being generally considered an incompetent judge of the occasion. May we now confess that the paragraph in question was written 48 hours previous to the dinner. On recalling yet another "Going-Off Dinner," held in the College as usual, four days ago, we are under no delusions, the company was undoubtedly more than usually hilarious, the dinner, in consequence, more than usually successful, though those about to leave the stage of their last six years or more of life, were no less sad than others before them.

Mr. P. M. F. Bishop was elected President of the Residents for the coming three months, and Mr. R. Bruce-Pearson, Vice-President.

▭

WITH much regret we record the deaths of two members of the nursing staff: Nurse Winifred Weeks, who entered the Hospital in September, 1927, died in Miriam, on 11th August, after two

months' illness; Nurse Kathleen M. Pritchett, who entered the Hospital in April, 1930, died on 16th August, in Bright, following an operation. We take this opportunity of offering the deepest sympathy of Guy's to their relatives and friends.

THE recent success in higher examinations of Guy's men, who have left the Hospital and in some instances been in general or other practice some years, has been very striking. In our last number as many will have noticed, we published the London M.D. results, all but 100 per cent. success for Guy's we understand. We would congratulate the successful candidates, namely Drs. C. W. Marshall, W. M. Brown, E. E. D. Gray and F. Marsh.

In surgery, also, two successes have lately passed unnoticed, Messrs. J. Gray and A. Simpson Smith, have both passed the examinations for the M.Ch. Cambridge. May we also congratulate them, though tardily.

Infections of the Hand

A Clinical Lecture delivered at Guy's Hospital by Mr. W. H. Ogilvie, M.S., F.R.C.S.

GENTLEMEN,—On May 29th I gave a clinical lecture on Infections of the Hand. It was based upon the history of a patient who had permanently lost the use of the index finger of his right hand, a disability which is estimated in the Law Courts at from 25 per cent. to 35 per cent., following incorrect treatment of a pulp infection. After discussing infections of the terminal phalanx, I showed the instructional film issued by the American College of Surgeons.

I have rewritten this lecture in a form suitable for appearing in print, because of the importance of the subject. The pathology and treatment of infections of the hand have now for some years been based upon the anatomical researches of Kanavel. Yet the textbooks available to students deal with this vital matter in the most inadequate manner, and it is still possible and usual for a man to qualify without knowing its essentials. I have only dealt with the most common infections. For a full and interesting discussion on the subject, I would refer readers to the small book written by the late L. R. Fifield of the London Hospital.

ANATOMY.

The skin of the hand is fine and hairy on the dorsum, thick, hairless and marked by characteristic papillary ridges and creases on the flexor aspect. The subcutaneous tissue on the palm is scanty, and subdivided by dense meshes of connective tissue in a manner similar to that of the scalp; it is absent at the flexion creases in the palm and fingers, and here the skin is practically in contact with the deep fascia and the thecæ of the flexor tendons.

The skin and subcutaneous tissue over the terminal phalanx are modified in a special manner for a special purpose, and a knowledge of the anatomy of this phalanx is important in the surgery of infection. (Fig. 1.)

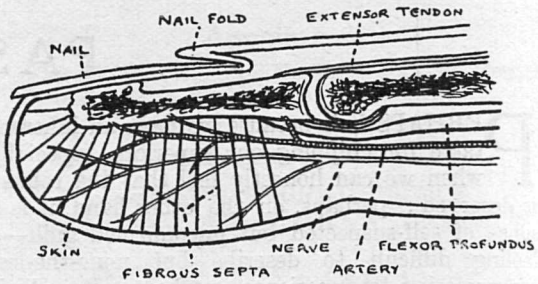


Fig. 1

Schematic longitudinal section of Terminal Phalanx.

The nail is a cutaneous organ developed for protection and aggression, chiefly against the smaller enemies of mankind. It is limited at the sides by a shallow groove, and above it is overhung by a semi-circular fold of skin, the cuticle or paronychium. The root of the nail extends about $\frac{1}{8}$ inch under the paronychium, and here the nail is formed by cornification of the stratum lucidum of a specialised strip of epidermis. As the nail is formed it is pushed forwards, and appears on the surface, as yet unfinished; while cornification is incomplete, the nail is imperfectly translucent, and this immature nail is the opaque area known as the moon. The nail grows at the rate of 1/32nd to 1/25th of an inch a week, and as it advances over the nail bed, its thickness is added to from below. There is no subcutaneous tissue under the nail bed, the deeper layers of the dermis being continuous with the periosteum. On the flexor aspect of the distal phalanx, the finger pad, the subcutaneous tissue is very abundant, and is divided by a number of strong fibrous septa, which radiate from the periosteum to the skin. The distal four-fifths is a closed space, containing loose fat, which therefore fluctuates. When an inflammatory exudation occurs in this space, it cannot escape,

and the tension rises rapidly, obstructing the blood supply.

The lymphatic vessels of the hand and arm tend, as elsewhere, to follow the veins. Thus the lymph channels from the fingers pass backwards to join others running on the dorsum of the hand. The

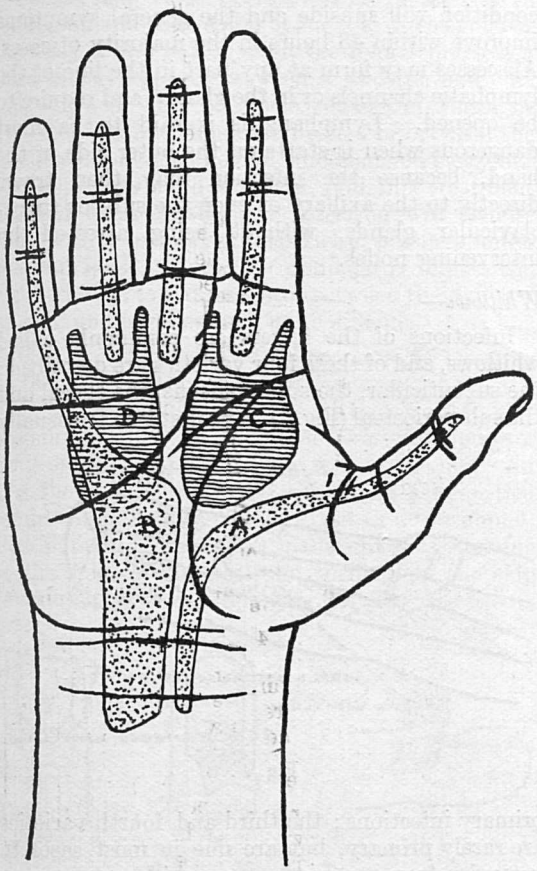


Fig. 2
Synovial Sheaths and Cellular Tissue Spaces in the hand
A. Radial Bursa. B. Ulnar Bursa.
C. Thenar Space. D. Middle Palmar Space.

arrangement on the palm is peculiar, for all the vessels are very fine, and they run towards the nearest part of the periphery of the palm to reach the dorsum of the hand; thus the lower vessels run downwards, those in the middle towards the sides of the palm, those above, towards the wrist. The lymphatics from the ulnar side of the hand end in the supratrochlear gland, whence fresh channels run to the glands along the axillary vein. The lymphatics from the radial side of the hand run directly to the axillary glands. A few vessels from the outer side of the hand and arm accompany the cephalic vein, and end in the infra-clavicular glands.

The fibrous sheaths of the long flexor tendons, the thecæ, extend from the base of the proximal to the base of the distal phalanges, being attached to the edge of their palmar surfaces. The sheaths are strong opposite the phalanges, weak opposite the joints, where they are also closely related to the skin, and therefore exposed to injury. The thecæ of the fingers contain the flexor sublimis and profundus tendons, that of the thumb, the flexor longus pollicis tendon. The synovial sheaths of the flexor tendons are disposed at the wrist in two sacs, the radial and ulnar bursæ. (Fig. 2.) The radial bursa (A) contains the sheath of the flexor longus pollicis only; it extends into the forearm about $1\frac{1}{2}$ inches above the anterior annular ligament, and downwards to the insertion of the tendon in the distal phalanx of the thumb. The ulnar bursa (B) is a large cavity, containing the flexor sublimis and profundus tendons and the median nerve. This synovial sac consists of a common cavity to the ulnar side of the tendons, whence three pouches open towards its radial side, one in front of the tendons, one between the superficial and deep tendons, and one deep to the tendons. The ulnar bursa extends proximally $1\frac{1}{2}$ inches above the anterior annular ligament, and distally sends a prolongation along the tendons of the little finger as far as the terminal phalanx, but ends as regards the other three tendons at the middle of the palm, just proximal to the superficial arterial arch. The radial and ulnar bursæ communicate at the wrist in nearly 50 per cent. of cases. The thecæ of the index, middle and ring fingers are lined by synovial sheaths which end proximally opposite the necks of the metacarpals.

Deep to the flexor tendons, and between these and the muscles which cover the metacarpus, are two cellular tissue spaces, known as the thenar space and the middle palmar space. (Figs. 2 and 3.) These are only potential spaces, but, since they are liable to become infected by various routes, a knowledge of their site and anatomical relations is important. The thenar space (Fig. 2 C) is bounded behind by the fascia covering the adductor muscles of the thumb, in front by the flexor tendons of the index and the first and second lumbricals and the thenar portion of the palmar fascia, to the outer side by the flexor longus pollicis tendon and the radial bursa, and to the inner side by a septum which divides it from the middle palmar space, a sheet of connective tissue passing from the third metacarpal to the fascia behind the flexor tendons (Fig. 3). The middle palmar space (Fig. 2 D) is bounded behind by the fascia covering the interosseous muscles of the 3rd and 4th interosseous spaces, in front by the long tendons to the middle ring and little fingers, to the inner

side by the hypothenar muscles, and to the outer side by the septum mentioned above (Fig. 3). Distally, diverticulæ pass from these

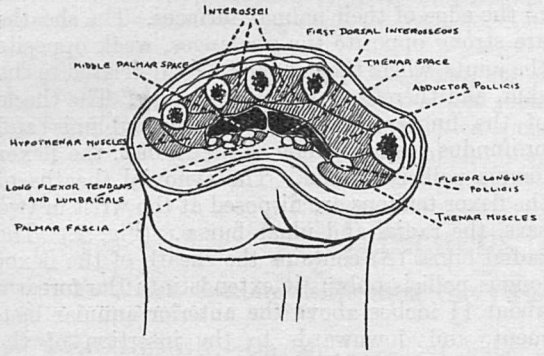


Fig. 3

Transverse Section across Metacarpal region of Right hand, to show the Cellular Tissue Spaces.

spaces along the lumbrical muscles (Fig. 2). There is a third connective tissue space in the same plane which belongs to the wrist and not the hand, the space of Parona, which lies between the pronator quadratus behind, and the long flexor tendons in front.

INFECTIONS OF THE HAND.

Lymphangitis—

Lymphangitis very commonly affects the hand because it is the organ of exploration and prehension, and is often pricked, scratched, or cut by septic objects. When such infections are acquired in the post-mortem room or the operating theatre, they are apt to be of a very virulent type, and are not infrequently fatal.

In lymphangitis the site of infection may be seen, or it may be too small to appear. The surrounding area is red, hot and swollen, and feels stiff and burning. The dorsum of the hand is œdematous. In the arm the lymphatic vessels are seen as red streaks, and the lymphatic glands to which they lead are enlarged and tender. When the infection has started in a finger, tenderness is diffuse, and not limited to one phalanx, or to the line of the tendon sheath ; movement of the finger within a moderate range does not increase the pain. In the hand, the contour of the palm is not altered, the swelling being entirely on the dorsum. These observations enable us to distinguish a lymphangitis from an infection of the tendon sheaths or of the tissue spaces of the hand, an important distinction when treatment is considered.

Treatment of lymphangitis is never operative in the early stages. Rest is the first essential. The patient is put to bed, the hand splinted, and the arm put in a sling. Hot fomentations or arm baths are applied frequently, and 20 to 50 c.c. of polyvalent antistreptococcal serum are given subcutaneously, and given again if necessary on subsequent days. In a severe case 60 c.c. of the serum, preferably 20 c.c. of three different makes, may be given intravenously in a pint of saline solution. The local condition will subside and the general symptoms improve within 48 hours in the majority of cases. Abscesses may form at any part in the line of the lymphatic channels or in the glands, and require to be opened. Lymphangitis is said to be most dangerous when it starts on the outer side of the hand, because the infection may then travel directly to the axillary or even the sub- or supra-clavicular glands, without being arrested by intervening nodes.

Whitlows—

Infections of the fingers are commonly called whitlows, and of these four varieties are described : the subcuticular, the subcutaneous, the thecal and the sub-periosteal (Fig. 4). The first two are usually

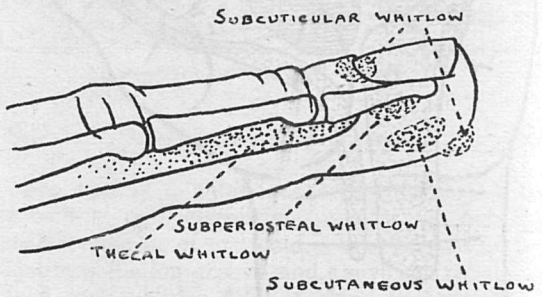


Fig. 4

primary infections ; the third and fourth varieties are rarely primary, but are due in most cases to extension from a subcutaneous whitlow.

Subcuticular Whitlows are of two varieties—

(1) *The purulent blister* is a superficial infection that may follow any trivial scratch, or may even arise where there is no visible injury.

Pus accumulates under the cuticle, forming a rounded, yellow swelling. There is little pain and no constitutional symptoms. Treatment consists in snipping away the cuticle and applying antiseptic dressings. Should there be much pus or any swelling of the phalanx, a subcutaneous whitlow must be suspected, and the base of the blister examined for a small track leading to pus under the skin.

(2) *Paronychia*—This form of sub-cuticular whitlow is much more important, because of its chronicity. The infection may enter through a

fissure at the side of the nail, or be caused by a small injury in manicuring. It is a frequent cause of casualties among dressers, because daily scrubbing with strong antiseptics impairs the resistance of the skin, and the entry of pathogenic organisms from septic dressings is rendered easy.

Paronychia in its early stages is seen as a reddening and thickening of the fold at the edge or the base of the nail; when the fold is pressed, a bead of pus appears between it and the nail. At this stage a wisp of gauze soaked in Eusol or hypertonic saline should be pushed in between the thickened fold and the nail, and changed every few hours. If the hand is rested, and this treatment pursued energetically, the infection will usually subside in a few days; otherwise, pus gets under the nail itself, where free drainage is impossible. Exuberant granulations form between the nail and its bed, and cure is much more difficult.

It is usually possible to determine, by pressing on the nail, whether infection has spread to the nail bed. If this has occurred, the nail feels wobbly, and pressure produces considerable pain, and causes a bead of pus to appear at the root of the nail. An anæsthetic should now be given, and a band tied round the root of the finger to act as a tourniquet. Two parallel incisions are made upwards, starting at the sides of the nail and turning up the skin covering its base as a flap (Fig. 5). The nail base is

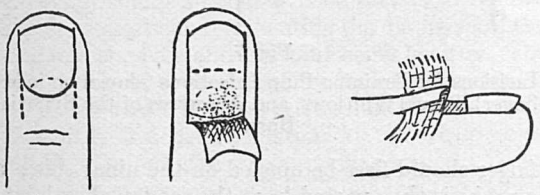


Fig. 5

Treatment of Paronychia.

(a) Incisions outlining flap.

(b) Flap turned back. Incision across nail.

(c) Proximal half of nail removed. Gauze strip under skin flap.

then inspected. If pus only extends under one side of the nail, that side is cut away. If, as in most cases, the whole nail base is undermined, the proximal half should be cut away, leaving the distal half as a protection, which will later be displaced by the growth of the new nail.

A Subcutaneous Whitlow is a cellulitis of the finger. It usually follows a prick and affects the pulp of the distal phalanx, which is red, hot, swollen and painful, throbbing with the pulse. The swelling is limited to the last joint, movements of the finger are not resented, and there are no constitutional disturbances.

The terminal phalanx should always be opened by a horse-shoe shaped incision, parallel to the nail, and just anterior to it (Fig. 6). In mild cases only

Fig. 6

Incision for Subcutaneous Whitlow.

one side of the horse-shoe need be incised. This incision divides all the septa going from periosteum to skin, and therefore completely relieves the tension in the "closed space": it passes behind the digital nerves; it cannot injure the tendon sheath or the periosteum, and it leaves a scar which is not on the site of pressure.

A Thecal Whitlow is commonly a sequel of a pulp infection. The pus reaches the tendon sheath by direct extension, by lymphatic spread, or by infection with the point of the knife when the obsolete mid-line incision has been employed to open a subcutaneous whitlow. The tendon sheaths may also be infected by the direct injury of a prick or scratch in the flexion crease of the fingers, where they lie close to the skin; by direct extension from a suppurative arthritis or in the palm from a tissue space abscess; or, rarely, by organisms carried by the blood stream.

When a thecal whitlow is present, the patient looks and feels ill; his temperature and pulse are raised. The affected finger is swollen throughout its length, and held in the semi-flexed position; active movements are very limited, and can only be carried out in the direction of flexion. The finger feels hot and may be a little reddened. Passive extension, and pressure along the line of the flexor tendons as far as the metacarpophalangeal joint, cause extreme pain. If the tendon sheath of the thumb or little finger is involved, extension of the infection to the radial or ulnar bursa is probable.

Infections of the ulnar bursa show, in addition to the symptoms and signs of a thecal whitlow of the little finger, pain and tenderness over the anatomical site of the bursa in the palm and wrist. There is a very slight loss of concavity in the inner half of the palm and a more obvious swelling above the anterior annular ligament. The dorsum of the hand is œdematous. Voluntary movement of the index, middle and ring fingers is limited, and passive extension of these fingers causes pain, but to a less degree than in the case of the little finger. Infection

of the radial bursa is shown by pain and tenderness over the palmar surface of the metacarpal bone of the thumb and the radial side of the wrist, with slight swelling of the thenar eminence; the other signs of whitlow, fixed flexion, loss of voluntary movements, pain on passive extension, and tenderness on pressure along the line of the fibrous sheath in front of the phalanges, are also present.

A thecal whitlow is one of the most serious emergencies that you may be required to treat in practice. Correct treatment undertaken immediately will ensure full restoration of function in a fair proportion of the cases; in the majority there will remain some adhesions of the tendons to their sheaths, so that the finger, though useful, has a limited range of movement. Delayed or faulty operation leaves at best a stiff, useless, and painful finger, which requires amputation later; more often it leads to wide infection of the sheaths and tissue spaces in the palm, so that the hand, after months of treatment and repeated drainage, remains a useless claw; at worst, and by no means infrequently, it is responsible for the amputation of the limb or the death of the patient.

An incision in the mid line of the palmar aspect of any part of any finger is evidence of the most gross and inexcusable incompetence on the part of the operator. The reasons why such an incision should never be made in the distal phalanx have already been given. In the proximal and middle phalanges, a mid-line incision also fails to relieve tension in the subcutaneous layers, and leaves, after healing, a scar which limits movements and is exposed to pressure. When the theca is opened by such an incision, the tendons dislocate forwards, and lie exposed on the surface of the wound so that they must slough.

All incisions in the fingers should therefore be lateral. In the terminal phalanx, such lateral incisions may take the form of a horse-shoe surrounding the pulp. In the other phalanges they may be made on either side, but an exposure on the ulnar side avoiding the lumbrical muscle is preferable, except in the index, where an incision on the radial side has obvious advantages (Fig. 7). The incision is just anterior to the digital nerve.

When dealing with a thecal whitlow, a tourniquet should be applied before operation, since the degree of infection present and the amount of drainage necessary can only be estimated in a bloodless field. If the tendon sheath is seen to be distended, it is slit up along the side. In some cases of mild infection it may be sufficient to open the theca along the phalanges only, leaving it intact opposite the joint; in the majority, the whole length of the sheath should be incised. When the ulnar bursa is infected, the theca of the little

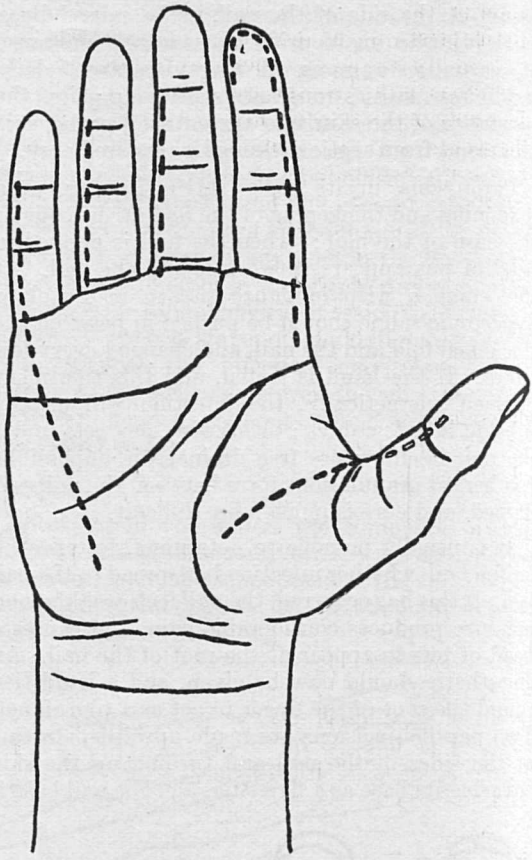


Fig. 7

Incisions for Draining Pulp Infections (shown on index finger), Thecal Whitlows, and Abscesses of the Synovial Bursæ.

finger should first be opened on the ulnar side; a a probe is then passed from the tendon sheath into the bursa, and the latter opened widely to the ulnar side of the flexor tendons. When the radial bursa is involved, the theca of the flexor longus pollicis should first be opened by an incision along its ulnar side, and the incision prolonged over the ulnar side of the thenar eminence, laying open the bursa as far as the annular ligament. In operations for drainage of the ulnar and radial bursæ, the deep branch of the ulnar and the muscular branch of the median nerve must be avoided at the upper end of the incision.

In order to obtain good function after suppuration in the tendon sheaths of the hand, it is essential that infection should be overcome before there is any destruction of tissue, and movements started before adhesions have formed. The exposure described provides the freest possible drainage, while the tendons remain in their sheaths and are protected from direct exposure by the

anterior flap of skin, so that they do not slough. Drainage should be provided along the incision in the case of thecal infections, and into the retro-tendinous pouch in the case of the ulnar bursa. This may be obtained by laying a Carrell tube along the wound and approximating the skin over it by two or three loosely tied stitches, after which, two-hourly irrigation is instituted; or by placing a drain of rubber dam in position and putting the hand in a hypertonic bath every four hours. As soon as the general symptoms subside and the wound begins to look clean, the drain should be removed, and voluntary movements of the fingers started. Fomentations will be required for a few days, after which, they may be replaced by Eusol dressings.

A Sub-Periosteal Whitlow is usually the result of interference with the blood supply to the terminal phalanx, following an infection in the closed space; this necrosis rarely affects the base of the phalanx, because this receives its blood supply from the artery before it enters the closed space. Thecal whitlow and suppurative arthritis which is itself usually secondary to a thecal whitlow, may lead to osteomyelitis of the phalanges.

Necrosis of the terminal phalanx should not occur if pulp infections are widely opened at an early stage by the horse-shoe incision. Prolonged suppuration after drainage suggests bone disease, and the diagnosis is confirmed by the probe and X-ray. Usually all that is necessary is to remove a loose sequestrum representing the diaphysis of the phalanx, the base and the joint being healthy. The final result of sequestrectomy is, however, apt to be unsatisfactory because the nail bed remains deformed, and disarticulation at the distal joint will be required after the sinus has healed. When a horse-shoe incision has been employed, the palmar flap required to cover the end of the finger is healthy and unscarred.

TISSUE SPACE INFECTIONS.

The middle palmar space may be infected directly by penetrating wounds of the palm, or indirectly, by extension from suppurating foci, especially from infected callosities over the metacarpal heads, and thecal whitlows of the middle and ring fingers. A collection of pus forming in the subcutaneous tissues under a callosity tends to pass backwards in the web between the digitations of the palmar fascia; a whitlow in the tendon sheath of the middle or ring fingers will ultimately rupture at the proximal closed end of the synovial pouch opposite the neck of the metacarpal; in each case infection reaches the middle palmar space along the lumbrical muscle. These isolated infections of the space are, however, uncommon. In those lamentable cases where the whole hand has become involved, following delayed or unsound treatment of a localised lesion, the palmar spaces take part in the general suppuration.

Where there is an abscess in the middle palmar space, the constitutional symptoms are usually severe. Locally there is marked swelling of the palm, whose normal concavity is converted to a moderate convexity. Œdema of the dorsum is also present.

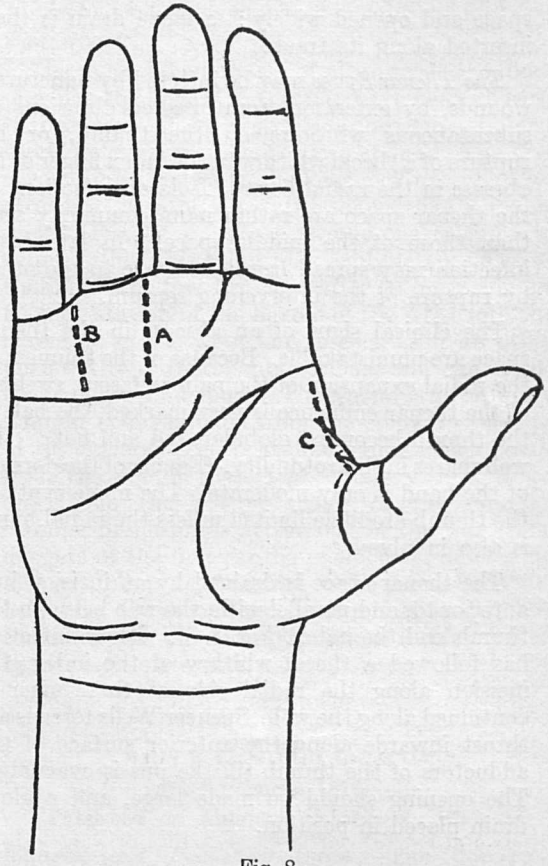


Fig. 8

Incisions for Draining the Palmar Spaces.

A. Middle Palmar Space.
B. Alternative incision for Middle Palmar Space.
C. Thenar Space.

Later, pus may track along the lumbrical muscles, and point in the webs between the middle, ring and little fingers. The characteristic points which serve to distinguish an infection of the middle palmar space from one of the ulnar bursa which it closely resembles are, that the bulging of the palm is much more marked and the swelling does not extend above the annular ligament, the pain and tenderness are less accurately localised, and the limitation of movements of the fingers is incon-

siderable, while passive extension does not cause extreme pain.

Drainage of the middle palmar space is attained by making a longitudinal incision in the interval between the middle and ring fingers, extending from the free edge of the web to the distal transverse crease in the palm (Fig. 8 A). This incision is deepened till the lumbrical muscle is exposed. A pair of Spencer Wells forceps is pushed along the dorsal surface of the lumbrical into the palmar space and opened widely; a glove drain is then inserted along its track.

The Thenar Space may be infected by punctured wounds, by extension from infected abrasions or subcutaneous whitlows on the thumb, or by rupture of a thecal whitlow in the index finger or an abscess in the radial bursa. Isolated infections of the thenar space are rather more commonly seen than those of the middle space. In late cases infection may spread from one space to the other by rupture of the intervening septum.

The clinical signs of an abscess in the thenar space are unmistakable. Because of the thinness of the radial expansion of the palmar fascia, swelling of the thenar eminence is very marked, the ball of the thumb becoming globular, red and hot; the web shares in this rotundity. Œdema of the dorsum of the hand is only moderate. The movements of the thumb are little limited unless the radial bursa is also involved.

The thenar space is drained by an incision just anterior to, and parallel with, the web between the thumb and the index (Fig. 8 C). Where infection has followed a thecal whitlow of the index, the incision along the radial side of that finger is continued along the web. Spencer Wells forceps are thrust inwards along the anterior surface of the adductors of the thumb till the pus is evacuated. The opening should be made large, and a glove drain placed in position.

DISCUSSION OF HAND INFECTIONS.

A knowledge of the anatomy of the tendon sheaths, synovial bursæ, and tissue spaces in the hand is essential in order that their infections may be diagnosed accurately and treated effectively. But these infections are rarely primary. The most important of all primary lesions is a subcutaneous infection of the pulp of the terminal phalanx. Thecal and subperiosteal whitlows are, in the great majority of cases, secondary to such an infection; abscesses in the bursal sacs and tissue spaces are still later sequelæ. Correct and energetic treatment, if it be applied while infection is limited to the terminal phalanx, will in most cases, save the finger; if the sheath is infected, it will save the hand, but will rarely restore the finger to full use; when pus has reached the palm, the freest drainage scientifically carried out is a desperate measure, which may prevent infection of the bones and joints, but cannot avert some loss of function.

The neglected septic hand, a condition encountered too often even to-day, defies anatomical analysis; synovial bursæ and connective tissue spaces are alike involved in a wide-spread suppuration in which even the barriers of these compartments have been transgressed. Pus has found its way into all the spaces in the palm, and in the forearm has burst through the upper limits of the bursæ and spread widely in the space between the long tendons and the deep muscles. Here, all that we can do is to drain the tissue spaces and bursal sacs in the palm; to make a wide opening from side to side above the wrist and behind the long tendons, avoiding the vessels and nerves; to lay rubber drains into these cavities, and to persevere with splinting and frequent baths. Recovery, if it

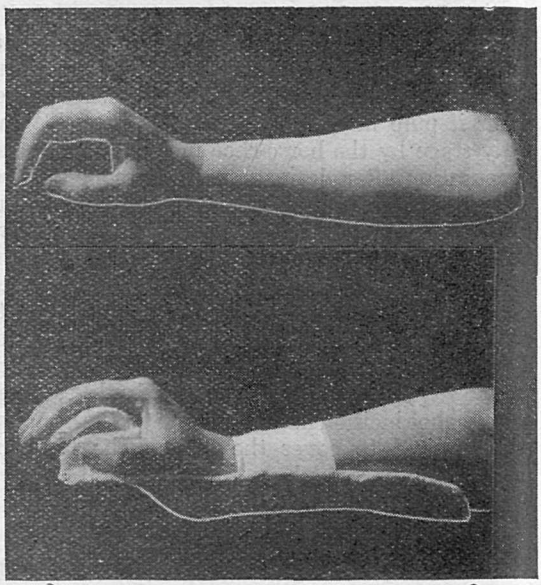


Fig. 9

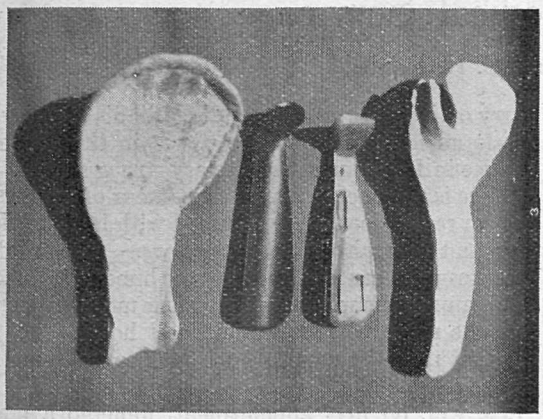
Above—Correct Position for Ankylosis of the Hand.
Below—Moulded Plaster Splint applied.

comes, will be slow and complicated by infection of the bones and joints of the carpus and metacarpus. The final result will be a hand that has lost most of its use.

When dealing with such a hand, which will almost certainly be stiff, it is important to realise that a small amount of movement may be very valuable in one position and almost valueless in another. Metacarpo-phalangeal joints with a

range of movement of only 20° are useless when fully extended; if they are flexed to 45° the same amount of movement is most useful. At the inter-phalangeal joints, stiffness in either full extension or pronounced flexion is a serious handicap; if the stiff fingers are in a gradual curve, they can grasp large objects, and be brought into opposition to the thumb. The optimum position for ankylosis of the hand is therefore one with the wrist dorsiflexed 45°, the thumb in full opposition, the metacarpo-phalangeal joints flexed 45°, and the fingers bent in the arc of a circle of about 3 in. diameter (Fig. 9). In this position, even though the long flexor tendons have sloughed or are anchored in their sheaths and the joints are fixed by a fibrous ankylosis, the hand is not useless. It can hold large objects or pick up small ones, and can wield pen or brush.

Shortly after operation, while the drains are in position, and arm baths are being given every four hours, it is sufficient to keep the arm on a straight anterior splint with a ball of wool the size of a cricket ball lying in the hollow of the palm and fingers. As soon as less frequent dressings and



(a) (b) (c) (d)

Fig. 10

(a) The Cock-up Atrocity.

(b) and (c) Correct forms of Cock-up. (b) Is for either hand: (c) is for the right hand, and allows full opposition of the thumb.

(d) Moulded Plaster Splint to hold hand in correct position for ankylosis.

diminished discharge allow it, a more permanent splint should be applied. The best form of splint to maintain any desired position of the hand is one made of plaster of paris for the individual case (Fig. 10 D). The hand is smeared with vaseline, and a freshly made slab of plaster is applied and smoothed into even contact with all its surfaces. As soon as the plaster has set, the slab is removed, and the outline of the proposed splint drawn upon it with an indelible ink pencil. If necessary, additional ribs of plaster bandage are applied on the surface of the slab away from the hand along the lines of stress, where the splint requires reinforcement. It is then trimmed to the marked lines with a sharp knife, and set aside. When dry, the surface next to the hand is covered with a layer of lint fixed with flour paste. If soiling is anticipated, or permanence desired, the splint may be painted with white cellulose paint before the lint is applied; I have had splints so prepared in daily use for more than a year.

The most difficult cases of all to treat are those in which the fingers and thumb have been allowed to become stiff in a straight position. I must therefore warn you against two splints. The first is sometimes known as the long cock-up splint, an atrocious piece of apparatus shaped like a tennis racket (Fig. 10 a). There is only one occasion in surgery when this splint may legitimately be used, that is for the first fortnight after an operation for transplantation of the flexors of the wrist into the extensors of the wrist and fingers. For all other purposes it is thoroughly vicious, and cannot be too strongly condemned. The second is an ordinary straight splint applied from the elbow to the tips of the fingers. The boardlike hands which result from the use of these two splints were familiar objects in the plaster rooms of the military orthopædic hospitals at the end of the war. The dangers of the first can be avoided by destroying all such splints as are found in the precincts of the hospital; the second danger is not so easily overcome, for it is the misapplication of a splint which has its legitimate uses.

Guy's Hospital Gazette

(ESTABLISHED 1872)

Published on Alternate Saturdays. Price 9d.

Editorial and Publishing Office:—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, **12s. 6d.** Post Free, payable in advance.

A Journal of Hospital News, Medicine, Surgery and Dentistry.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Summer at Guy's

SUMMER at Guy's,sweet summertime at Guy's;
Long drowsy lunch time hours that used to pass
The while we gazed on blue unclouded skies,
Outspread on friendly couch of new-sown grass :
The breezy theatre balcony where we'd laze
And doze amid the contrapuntal bark
Of half-a-dozen gramophones, or gaze
On pretty nurses passing through the park :
The trees by Hunt's House casting mottled light ;
The evening sparrows thronging to the tower ;
The bird bespattered pavement, and at night
The moon painting the wards in silver shower.
Hot night-theatres during take-in week—
The Registrar with drowsy-making chirrup
Would demonstrate MacBurney till we'd sneak
Outside to get a drink of lemon syrup :
Then to the Dressers' Room we panting sped
To further the hobnailing of our liver.
And after, like young fools, went not to bed,
But watched the dawn come faintly up the river.
Summer at Guy's : the hops' too-powerful smell ;
The Bridge (quite unconventional) we played ;
Maze Pond awaking to the ambulance bell,
And pigeons cooing round the Colonnade.
Physicians' rounds in August, heat-encumbered ;
We stood and fought with sleep for duty's sake,
But by the time that half the beds were numbered
We scarcely had the strength to keep awake.
If summer days were hot, the baths were cool ;
It was delightful after a drooping round
To fling our clothes off there, and play the fool
And shout out loud because we liked the sound.
Summer at Guy's, the work, the play, the browsing,
Wrapped in the dusty veil the Borough flings,
The smells, the sights, the noises, the carousing,
All these, and many more, were pleasant things.

S. A.

The Indian Medical Service

An Address by Colonel C. H. Reinhold

THE first *Guy's Hospital Gazette* that I opened on my return from India on leave a few weeks ago had a full page advertisement of the Indian Medical Service and a letter, over the initials G.H.F.G., which gave a very fair representation of the conditions of service as they are to-day, and I was tempted then to suggest enlarging on this theme at the old school if I could persuade the Management to take a sympathetic interest in my idea.

A few weeks later the mail from India brought me a letter from the Director General of the Indian Medical Service, General Megaw, a distinguished research worker whose name should be known to those of you who are interested in tropical medicine and have followed its advances in the last decade. It was a confidential letter and suggested that we of the I.M.S. would do well by going to our old schools and giving young graduates and students, on the threshold of qualification some idea of what service in the I.M.S. means ; and disabuse their minds that it is moribund as a European service. I have come, therefore, with this object in view and twenty-five years' service behind me, to tell you something about it. I will recall G.H.F.G.'s letter to you by reading the substance of it.

" Between your true pioneer who will volunteer for polar expeditions and explorations in darkest Africa, and the stay-at-home who is content to carry on in the same surroundings all his life, there exists an intermediate type to whom the idea of service in India must have a very strong appeal.

Here is romance, colour, the glamour of the East (which really does exist), coupled with ice, electric fans and mosquito-proof bungalows. In a word, the European has had time to " dig himself in," and to organize a life which, with climatic modifications, remains much what it would be at home.

What may the medical man look to as a career in the service ?

He will, on first appointment, undergo a preliminary—and highly instructive—course at the R.A.M. College, Millbank.

This, being taken in conjunction with junior officers of the R.A.M.C., includes such subjects as Hygiene and Military Surgery, Pathology and Tropical Medicine.

After an examination, he will depart to Aldershot, where a couple of months are spent learning the elements of drill, horsemanship—good fun this —and general military duties.

Thence, after a spot of leave, to India. It is the rule on first joining that an officer is posted to one of the larger stations and is left undisturbed for at least a year.

He is thus able to feel his feet under the guidance of more senior officers, to learn the manners and guile of the Indian troops, and put in time with the

Munshi (native Hindustani teacher) in order to pass the obligatory language exam.

His duties will consist in running the morning sick parade of an Indian regiment, which occupies an hour or so before breakfast, the best time of the day, and then to hospital where he will be allotted one or more wards of which he will have sole medical charge.

If he has any special bent or previous experience in some special line, *e.g.*, surgery or laboratory work, there will be, as a rule, every encouragement to pursue it, for contrary to popular belief a high professional standard is looked for, whilst the slacker finds himself in great demand for route marches, train duties and other such military "chores."

Consultants are always available and the beginner in tropical medicine will learn much from them and from his own researches in the laboratory.

Study leave, to which every officer is entitled, gives him a chance to take up some special branch of his first leave home, and on producing evidence of satisfactory work, counts towards accelerated promotion.

The future of any officer in the I.M.S. will naturally depend in a large degree on his personal tastes and predilections.

Posts as Civil Surgeon, often combined with professional duties at one of the smaller medical colleges, offer a wealth of variety of clinical work that is almost unbelievable. The opportunities of obtaining civil employment have been recently increased, and there is now an excellent prospect of any officer who is capable and desirous of taking a civil post being able to do so. Private practice is not, it is true, so lucrative as in the old days, but it still forms a very substantial addition to income.

Lastly, to the man with a qualification and a bent for the work, pathology, hygiene and research offer many opportunities, both in civil and in military employ.

The question of pay is naturally of great importance, for a rate in rupees is of no guidance unless one has a notion of the cost of living.

The writer, on entering the service and posted to one of the most expensive stations in India, was able, as a bachelor, to secure from his lieutenant's pay Rs. 100 (about £7 10s. 0d.) per month, and this without the least effort to economise.

For a married man, the expenses are naturally far heavier, and life would be difficult in most stations under Rs. 1,000 per month. This figure is reached after six years' service. It should, however, be noted that the introduction of four free passages home in the course of service has eased the married man's finances very considerably.

A word as to the lighter side of Indian life. Visitors to Bath, Bognor and Tunbridge Wells are apt to regard the European population of India as a savage and irascible breed, and whilst in later life there may be some justification for this view point, the newcomer will find himself welcomed and at once made free of a larger circle than he very probably enjoyed at home.

Since Western amusements such as theatres and night clubs are necessarily lacking, private entertaining and club life play a much bigger role than at home.

Dinner parties, tennis, teas, moonlight picnics, etc., follow one another with bewildering rapidity and the most hardened misanthrope is eventually dragged from his shell and made pull his weight in the station team.

The Gymkhana (Club) which exists in every station serves as the pivot around which social life revolves. Everyone joins as a matter of course, and here are facilities for most sorts of games, all at very moderate rates.

To the man keen on games, few careers could be more attractive. Work ceases as a rule at one o'clock—for we begin early—and the rest of the day is free for recreation.

Some stations are renowned for *shikar* (shooting), in fact, one's amusements, according to the locality, range from yacht racing to winter sports.

To sum up, therefore, one would recommend the Indian Medical Service to those who feel that a secure income and pension with the consequent absence of major financial worries coupled with a life in which sport and travel occupy a large part, is preferable to the routine of practice in this country.

To such it can be heartily commended ; to those who aspire to riches, to the much-married, or the adventurous it will not appeal."

This gives you a very good idea of the work on the military side.

The I.M.S., as you probably know, is a public service with the finest professional record behind it of all the public medical services in the Empire. Up till the War, the competition for vacancies was very high, and only men who were well above the average at the medical schools succeeded in getting in. The war brought with it, of course, abolition of all examination and a very natural flocking of young men into the British Medical Service, the R.A.M.C. ; and equally naturally and loyally Indians filled the ranks of the I.M.S. After the War—again naturally—young doctors had either a distaste for the military medical services, or civil practice was more lucrative, and even up till now there has not been sufficient competition to justify resuming the competitive examinations and ad-

mission is made by interview and selection; but we are not getting enough European recruits; and while the seniors are retiring, juniors are not entering in sufficient numbers to take their places, so that the higher administration are finding it difficult to fill some of the more important civil posts which used to be much sought after in the old days. As a matter of fact, gentlemen, this is the psychological moment for those of you who are so minded to join the I.M.S., for in a few years' time very attractive civil appointments, reserved for Europeans, will be available for junior men which I, and the pre-War generation had to wait many years for. *We* generally spent six to ten years in small civil stations with plenty of work, but few amenities and little monetary recompense, which the entrants of to-day will pass by, and jump to the more lucrative and pleasant places, of which there are many up and down the Continent of India. I should make it clear that for the first few years one would serve on the military side under the conditions described in the letter I have just read, and only after six or eight years' service would the opportunities on the civilian side be made available to those who desire it.

You will all, however, have heard the "Croakers" say that India is doomed and no place for a white man now. This is all wrong and, though we should have a sympathetic understanding of Modern India's very natural aspirations, it will be many generations before she can do without the guiding hand of England. She was an infant before the War and is feeling growing pains now, but shows no signs yet of having cut her wisdom teeth.

Europeans in large numbers will still be taking a big place in her administrative and executive machinery, and these are entitled to European medical advice. Moreover, with all the talk of Nationalism, European medicine has come to stay in India, and though there are already many able Indian professors of the art there is still room, and welcome, for Europeans. I do not mean that those of you who aspire to the staff here should divert your steps East, though we can do with the best and give them opportunities and clinical material as good as they can find anywhere else in the world. We cannot hope for the greyest of grey matter which comes to and goes from this great School, but we do not want the "chronics," as those who took many years to qualify, were called in my day. Guy's has not sent many men into the I.M.S. I believe I am the senior one on the active list to-day, and I dare say there are not twenty serving at the present time. We did not often have more than one a year before the war, and I do not ever remember two in a batch. We do not number scholarship holders and rugger blues among our numbers, but we want GOOD MEN, and hitherto I think we have had them.

It is gratifying that all the Guy's men I have known in the Service have been such that the School could be reasonably proud of, and they have always upheld its reputation as men of personality and resource. I hope you appreciate, gentlemen, that you belong to a School which stands pre-eminent in teaching self-reliance. If you do not know, you will as soon as you leave here. I remember years ago being told by a locum agent, who had no connection in particular with Guy's, that he could, with confidence, recommend a newly-qualified Guy's man for a locum because he learnt to stand on his own feet before he qualified, which could not be said of other schools. And this is the type we want, men of personality. I am sure there are now, as there were in my day, men who stand out in their year not for athletic or academic distinction, but as natural leaders, and these are the men the Empire wants—not India only—perhaps even more than the Old Country.

I said, in the beginning, I thoroughly agreed with G. H. F. G.'s letter, but will join issue with him in his last sentence when he says the I.M.S. will "not appeal to the adventurous." There is plenty of adventure still in India, both in work in plying your trade in curious places and under novel conditions, and play, shooting big game, climbing in the Himalayas, fishing grand rivers and pig-sticking.

I remember once improvising an operating table in a forest, with logs, and proceeding to do 30 cataract extractions in a morning; and on another occasion spending a very unhappy night in a distant planter's bungalow alone with a case of D.T.'s, who had access to fire arms, which I had not; and the climax being reached when a terrific thunderstorm broke over the place. Next day, on returning to my station, I nearly lost my car in a river which had risen to a torrent, from being a fordable stream, and had to wait some hours before it had fallen sufficiently for me to get across. A civil surgeon is the consulting opinion in all matters of medicine, surgery, public health and preventive medicine, in a district often the size of the largest English county, with a population of about one million; and he has a large central hospital where all the major surgery of that district passes through his hands.

High-grade work there is, too. Research in up-to-date laboratories, some of the finest ophthalmic clinics in the world, with unlimited material and gynæcology in more than one place that would compare favourably with anything of the same kind, in quantity and quality, in Europe and America.

Since putting these notes together, the two volumes of the Statutory Commission's recommendations under Sir John Simon have been published, and it is clear, from their unanimous report, that they hold very strong views on the necessity of an European element in the Medical Services for India and favour *all* that the Lee Commission recommended a few years back. If the Round Table Conference in the Autumn upholds these recommendations and Parliament ratifies them, I can confidently recommend the Indian Medical Service to you—Gentlemen—as a Service perhaps even more worth going into than it was when I entered it.

The emoluments are good, leave is liberal, and the facilities for study, with Government aid, are the envy of private individuals.

I shall be glad to answer questions, or give any further information in my power to enquirers.

Note.—Col. Reinhold will be available in the Medical School Office at 12 noon, on Tuesday, August 26th, when he will be pleased to give any further information to those wishing it.

Correspondence

Inter-Hospital Golf

To the Editor of the GAZETTE

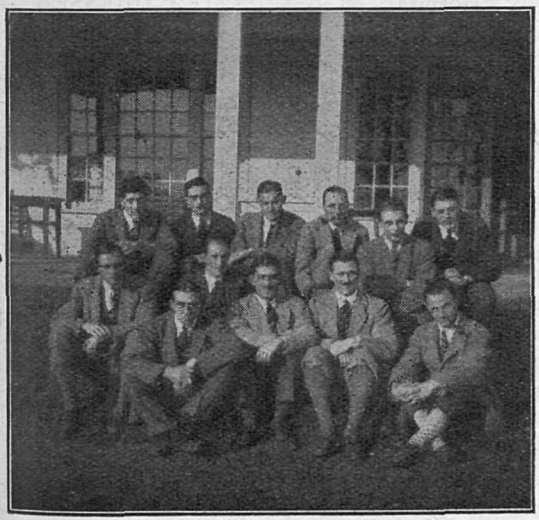
SIR,—May I draw attention to an error in the sports news under Golf in the *Gazette* of August 9th.

My attention was drawn to the statement " this is the first occasion that the Hospital has reached the final." This is quite incorrect.

I played in one golf final between 1911-1914. In 1919 when I was captain of the Golfing Society we beat St. Thomas's in the final, and again in 1920 we reached the final to be beaten at Hanger Hill by St. Bart.'s.

The names of the winning team in 1919 were—A. C. M. Coxon, G. M. Stuart, O. G. Morgan, C. Gill-Carey, G. F. McAlpine and A. R. Crowe.

I enclose photo of winning Guy's team taken together with St. Thomas's.



This morning I received from G. M. Stuart a cutting from the *Gazette* with a protest against the error referred to.

Yours, etc.,

Highlands, A. C. M. COXON
Dersingham, Norfolk.

Delay in Surgery

To the Editor of the GAZETTE

SIR,—I read with great interest Mr. Ogilvie's lecture on " Delay in Surgery "—a quality apt to be derided in clinical surgery of to-day. Yet his counsel in one paragraph caused me great surprise.

Surely it is highly dangerous to delay operation when an acute osteomyelitis is suspected, at any rate in children ! So I have been taught, and by my short experience led to believe. I doubt whether the lecturer himself would have " sat " on the hypothetical case he describes. To wait for text-book signs of "redness, heat and swelling " in this disease appears comparable with the practice now dead of waiting for fæculent vomiting before making a diagnosis of acute intestinal obstruction. Our last Take-In provided a case in point, hot fomentations having been applied to the leg of a boy for several days before admission, yet a diagnosis could have been made merely on the history he gave us, without the " third dimension " of two days. He died shortly after a minimal operative interference which revealed a tibia bathed in pus.

Further, how is one to judge a " mild and early " case ? It should be possible to trephine a bone with no risk of introducing infection. Whilst, if infection be present, tension will have been relieved, just as important a factor in preventing its spread as any attempt radically to remove infected tissue at this early stage.

Mr. Ogilvie mentions sharply localised tenderness over the bone. I have found this sign in acute osteomyelitis the most valuable of any, and the earliest. Yet that valuable sharply localised character is lost when redness, heat and swelling make their appearance.

I apologise for this lengthy letter, but diagnosis is always of extreme interest, and the treatment of this disease still controversial.

Yours, etc.,
D. W. C. NORTHFIELD.

42, Montpelier Rise,
Golders Green.

"P.R.D." Cards

To the Editor of the GAZETTE

SIR,—It has long been felt among Dressers that the return of P.R.D. cards to the Front Surgery from the Out-Patients' Department is not satisfactory. Sometimes, in cases of interest, the card is either returned with no diagnosis, or else with the diagnosis so illegible as to be valueless, or else the card is not returned at all. It appeared to me to be of interest, while acting as senior dresser, to keep a record of the cards given and see to what extent one's ideas on the subject were justified. Only those cards were recorded which were given to patients who were likely to go on to the Out-Patient Department.

A tally was kept of 94 cards, of these, 58, or 62 per cent., were returned, 4 without diagnosis.

When the results from the various departments were analysed, it was found that the three chief Out-Patient Departments, to which I sent patients (surgical, medical and skin), sent back approximately the same percentage of cards, about 65 per cent. It was also noted that the day of attendance seemed to be significant, particularly in surgical Out-Patient's. Thus, cards sent to this department on Thursday were almost invariably returned, while those sent on Monday were returned less well. Fewer cases were sent to the Eye Department, but the return of cards from here was bad, only 25 per cent. coming back to the Front Surgery. Fellow dressers have had the same experience with this department. Not enough cases were sent to the other departments to enable one to make generalisations.

The results are given in this table :—

Total sent	94
Total returned	58
Per cent. returned	62

Department.	*Sent.*	*Returned.*	*Per cent. Returned.*
Surgical	37	24	65
Medical	22	15	68
Eyes	8	2	25
Skins	18	11	61
Annexe	1	1	—
G.U.	1	0	—
Ear, Nose and Throat	3	2	—
Nerves	1	1	—
Women's Diseases	3	2	—

The general conclusions which can, I think, be drawn from these figures is that the return of P.R.D. cards is not good enough, only slightly over half coming back to the Surgery. Personally, I found it one of the most valuable ways of learning practical medicine and surgery, and it is rather disappointing, after having spent a certain amount of trouble on a case, for one's diagnosis not to be returned to one with suitable comments and advice. I trust that the persons concerned will consider these results and endeavour to improve the returns in the future.

Yours, etc.,
EX-DRESSER.

Guy's Hospital,
S.E.1.

Reviews

Handbook of the Vaccine Treatment of Chronic Rheumatic Diseases. By H. WARREN CROWE, D.M., B.Ch. Oxon., M.R.C.S., L.R.C.P. Published by Oxford University Press (Humphrey Milford). *Price* 2*s.* 6*d.*

NOW that Dr. Warren Crowe has planted himself in our midst it would be wise to reconsider his methods and striking claims. The Charterhouse Clinic, Crosby Row, Boro', for the treatment of Chronic Rheumatic diseases was opened in November, 1928, and has now sufficient patients to warrant a personal study.

The object of this particular handbook is to bring before the general practitioner a comparatively easy scheme of treatment for all forms of chronic rheumatism by stock vaccines of streptococci and the micrococcus deformans. The latter organism is a white colonied staphylococcus found in the urine and believed by Dr. Crowe to be the infective agent in Rheumatoid Arthritis. Excellent results are claimed and attention is drawn to the above clinic as ample proof of success.

We have previously reviewed Dr. Warren Crowe's Bacteriology and Surgery of Chronic Arthritis and

Rheumatism in this *Gazette*, and were then compelled to criticise the facility with which sweeping conclusions were assumed from entirely unsatisfactory premises.

In this handbook there is again a number of irritating criticisms of existing methods and unjustified praises of his own.

The first assumption is that all other attempts at vaccine therapy have failed, "Having cleared out of our way those false traditional ideas which have hitherto hampered the progress of vaccine treatment!" The chief differences between traditional methods and those of Dr. Crowe are that he uses much smaller doses of vaccine and interprets their effects with, he states, unusual care in order to avoid any focal or general reactions. Yet in America Dr. R. A. Keilty claims equally encouraging results with emulsions of streptococci so thick that one imagines a spoon would stand upright in the concoctions. Dr. Keilty feels that we are traditionally too cautious and must strive anew to produce *maximum* reactions.

It is probable that such enthusiasts fail to appreciate that any one who is treating large numbers of chronic rheumatic conditions with almost any form of injection will have a good percentage of apparent success. The only sound counter-argument would be for some ardent believer in the healing properties of sterile water to treat a large series of cases with injections and publish his results. It is the belief that these results could be interpreted as encouraging that makes us sceptical, not of Dr. Crowe's or others' success, but that their particular vaccine or technique is alone responsible.

Again when assessing the results at the Charterhouse Clinic, he states—"If further evidence was required, the fact that the attendances have risen in twelve months from seven to over seventy a week, must demonstrate even to the most sceptical that the patients obtain relief."

We would ask any Out-patient Officer in a General Hospital if he believes his overwhelming attendances are due to the relief he gives his patients. A "nice kind doctor" can amass as many Boro' patients as he may desire whatever the results.

In the section upon Ætiology the following paragraph occurs :—

"It is in some quarters denied that all the rheumatic diseases are bacterial in origin. The answer is simple. It is agreed that certain of the chronic rheumatic diseases are infective. That is a fact that no one will be found to deny. Now, since all the rheumatic diseases respond in exactly the same way to vaccine therapy, whether they are thought to be microbic or not, surely the only possible inference is that they are all microbic." We would ask Dr. Crowe to criticise the following syllogism :—

Some men have red hair;
All men are tickled by red hair;
Therefore, all men have red hair.

Nevertheless, it is not to Dr. Crowe as healing physician that we take exception. It is possible that his results, owing to his great care and extensive experience, are better than many others, but why must he destroy the scientific value of his work by this too eager attempt to establish his own greatness with careless hasty thinking.

L. W. C.

Gray's Anatomy 24th Edition, 1930. Edited by T. B. JOHNSTON, M.B., Ch.B. Published by Messrs. Longmans, Green & Co., Ltd. *Price* 42*s*.

GUY'S men have always favoured a "Gray," and they will feel proud that the Dean has had the responsibility of producing the new edition. It is thirty-three years since London was last its home, when the editors came from Gray's own Hospital, St. George's.

One has often wished for more profuse illustration especially for revision or reference, and the work is now enriched by many new pictures. Colour is freely used, and the reproduction is excellent. The structures related to the apex of the lung as viewed from below, the parotid bed, coloured plates of the peritoneum of great clarity, and diagrams of the pelvic and cervical fascia; these are but a few—the usefulness of which will be immediately appreciated. And a well known propensity for transverse sections of the body will be quickly recognised.

Nomenclature is now a less vexing question, and the English translation of the "New Terminology" is used throughout.

The title of the book is Anatomy—Descriptive and Applied, but in his preface the editor threatens to present further of those paragraphs dealing with application. To most students, anatomy is not an interesting subject of flesh and blood, but merely "dry bones." To the medical practitioner it is only of importance in its direct bearing on the problems he may meet. Hence, and especially with an ever increasing curriculum, to make "these dry bones live," by fostering interest in this side of the subject is all important. This has been achieved in the section on the Central Nervous System. It is to be hoped no future edition will be "pure" anatomy.

Gray's Anatomy will be more popular than ever.

D. W. C. N.

Landon Out-Patient Tea Fund

STATEMENT OF RECEIPTS AND PAYMENTS for the Year ended March 1st, 1930

RECEIPTS.

	£ s. d.	£ s. d.
To Donations and Collections (as per list)	69 12 6	
,, Interest on Invested Funds and Deposit	14 6 2	
		83 18 8
,, Balance being Excess of Payments over Receipts		1 9 10
		£85 8 6

PAYMENTS.

	£ s. d.	£ s. d.
By Cost of Tea, Groceries, Provisions, Fruit, etc.	36 5 2	
,, Band	12 12 0	
,, Gifts of Toys, Clothing, etc.	20 6 8	
,, Police Fees, Gratuities, etc.	8 4 6	
,, Printing, Postages, etc.	4 12 6	
,, Decorations, etc.	3 7 8	
		85 8 6
		£85 8 6

BALANCE SHEET, March 1st, 1930

LIABILITIES.

	£ s. d.
Accumulated Funds—	
Amount brought forward from last a/c.	406 16 5
Less—Excess of Payments over Receipts	1 9 10
	£405 6 7

ASSETS.

	£ s. d.	£ s. d.
Investments—		
5 per cent. War Loan at cost		150 0 0
Cash at Bankers—		
Deposit Account	225 0 0	
Current Account	30 6 7	
		255 6 7
		£405 6 7

Audited and found correct.

(*Signed*) BERTHA MARTIN,
Secretary.

(*Signed*) W. J. CURRY, *Corporate Accountant, Auditor.*

August 2nd, 1930.

Hospital Information, etc.

Change of Address

E. G. Slesinger, M.S., 14, Devonshire Place, W.1. *Welbeck* 8032.

P. F. S. Court, Government Medical Service, Hong Kong.

G. R. Shipley Stewart, M.B., B.Ch., The Croft, Stafford.

N. L. Lloyd, M.B., B.S., 60, Oakley Street, Chelsea, S.W.3. *Flaxman* 1313.

H. S. Knight, M.B., B.S., "The Grange," Tressillian Road, Brockley, S.E.4. *Lee Green* 5170.

Birth

ROCHE—On August 13th, 1930, at 3, Wilbraham Place, Sloane Square, S.W.1, to Barbara, wife of E. H. Roche, of Cambridge, New Zealand, a son.

Marriages

BURGESS—HARRIS. On August 2nd, 1930, at St. Peter's Church, Belsize Square, Hampstead, by the Rev. Thomas Wilson, M.A. and the Rt. Rev. the Lord Bishop of Niagara, Norman Burgess, M.A., M.D., M.R.C.P., only son of Mr. and Mrs. F. J. Burgess, of Clifton, Bristol, and Helen Louise, elder daughter of Mr. and Mrs. R. B. Harris, of Hamilton, Ontario, Canada.

GILLESPIE—HOWARD. On 9th August, 1930, at St. Columba's (Church of Scotland), Pont Street, S.W., by the Rev. Ian R. Gillan, R. D. Gillespie, M.D., M.R.C.P., elder son of Mr. and Mrs. Campbell Gillespie, Clarksdon, Glasgow, to Audray Margaret Mary, elder daughter of the late C. R. Howard, M.D., O.B.E. (Milit.), Frome, Somerset, and Mrs. Philip F. Howley, London.

EDS. { J. B. B. / P. M. F. B.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *6th September* 1930 *Number* 1099

PASSIM

THERE is a peculiar streak in the English character which idolizes the amateur in sport, in politics and in letters. The papers daily publish the stories of painters who are unexpectedly brilliant centre-forwards, of footballers who paint unmistakably bad pictures. It is a sign of revolt against the rule imposed by modern industry, the rule of " one man—one job." We feel this very strongly as we have just been reading Henry Ford's book, which is reviewed elsewhere in this issue. Anyone can screw nuts on to bolts efficiently, if he is driven to it by economic stress, not everyone has the courage to screw his nut with one hand and establish a ludo record with the other: and it is this streak of talent unexpected, of the " sæva indignatio " that makes us applaud the insurance agent as he breasts the waves of the Straits of Dover, and even listen in awed respect to bricklayers on bimetallism. Already we are at the day when one surgeon will do nothing but thyroidectomies, when another never looks out of the cranium. We look with apprehension to the day when specialisation is so complete that life will be one long gastrectomy. In those days may we be delivered from a lifetime devoted to the Back Surgery.

IT is with a very sincere regret that we have to announce the retirement of Mr. J. B. Blaikley from the Editorial Chair of this *Gazette*. Mr. Blaikley has served the *Gazette* for a year, and there are few of our contributors who will not agree with us that his energetic persistency and efficiency in marshalling contributions has been solely responsible for keeping up a standard set over 50 years ago when the *Gazette* was established.

Mr. Blaikley's resignation will—we warn our readers—be very evidently regretted, but, however much he will be missed by that kindly and patient type—the reader of Passim—we can assure our readers that we shall miss his guidance and advice considerably more.

RECENTLY we noted the death of an old Guy's man who had the distinction of being the oldest Freemason and Member of the Royal College of Surgeons—Dr. John Dixon. It is interesting now to note that we can lay claim to the oldest lady doctor. Dr. Harriet Clisby, who celebrated her 100th birthday last week, studied at Guy's during part of her studentship, and we can only suppose that she must have had a real affection for this Hospital since she served here as a nurse, although she was aiming to become a doctor. Dr. Clisby, who has had a life of varied adventure, is, despite her white hair, her frail body, and her great age, as vigorous as many ladies of half her years. She believes still in obeying the sensible, but sometimes rather tiresome rules of " keeping fit," and no morning passes without her devotion to 15 minutes physical jerks.

Obituary

ARTHUR ROBERTSON BRAILEY, M.A., M.B., B.Ch., F.R.C.P.

CAPTAIN Brailey, who lost his life in the recent yachting disaster off the coast of Cornwall, was educated at Downing College, Cambridge, and was for some time Student Demonstrator of Anatomy at that University. He came to Guy's, where his father was Ophthalmic Surgeon, in 1901, and was President of the Residents in 1904. He was eventually Ophthalmic H.S., and on leaving Guy's went to join his father in practice, carrying on the practice for some years after his father's death. He retired early, however, and went to live at Dunmow, in Essex. He was a man of sterling qualities, very staunch to his friends and a thorn in the side of impostors, even if they happened to be in authority over him, quite regardless of what it might bring on himself. He belonged to the Naval Volunteers and was a first-class sailor. Though he was very fond of yachting and sailing he never learned to swim, and on two occasions, in his early days, almost lost his life on this account.

MISS MINA JORDAN

IT is with regret that we announce the death of Miss Mina Jordan on August 4th, 1930, from tuberculosis, contracted during the war. Miss Jordan entered Guy's as a probationer in September 1913, and completed her training in November, 1916. On 1st December, 1916, she became a member of the Q.A.I.M.N.S.R. and saw service on H.M.S. *Aquitania*, in Salonika and Constantinople, being mentioned in dispatches in February, 1919, and afterwards invalided out of the service.

During her years of training at Guy's she was much liked by her patients and fellow workers, and her death will be sincerely regretted by all who knew her.

Fallacies and Dangers in Treatment

A Clinical Lecture delivered by Dr. L. J. Witts

I wish herein the Chymists *had been more sparing: who over-magnifying their preparations, inveigle the curiosity of many, and delude the security of most. For if experiments would answer their enconiums, the Stone and Quartane Agues were not opprobrious unto* Physitians: *we might contemn that first and most uncomfortable Aphorism of* Hippocrates, *for surely that Art were soon attained, that hath so general remedies; and life could not be short, were there such to prolong it.*

SIR THOMAS BROWNE,
Pseudodoxia Epidemica, 1672.

GENTLEMEN,—In the preface to his text-book of physiology, Starling wrote "The only foundation for rational therapeutics is the proper understanding of the workings of the healthy body. Until we know more about the physiology of nutrition, quacks will thrive and food faddists abound. Ignorance of physiology tends to make a medical man as credulous as his patients and almost as easily beguiled by the specious puffings of the advertising druggist." In spite of numerous editions of Starling's text-book, the number of advertisements of proprietary preparations addressed to physicians shows no sign of diminishing. It is easy to understand why the manufacturers of the various petroleum preparations can so liberally supply us with beautifully illustrated calendars and monographs, for their expensive advertising campaign enables them to dispose of a by-product of the petrol industry at a very satisfactory price. Similar considerations influence the vendors of the endocrine tablets, which are made from the offal of the slaughter-houses, and the much advertised foods "rich in lecithin and phosphorus," which enable the creameries to sell the casein of their skim-milk at a profit. But the majority of proprietary remedies are deliberately invented and manufactured for the medical profession and without its support they would disappear. They are advertised in terms which lend a specious air of rationality to their employment. The statements made are often quite untrue. Surprising though it may seem, some of the best known drug firms will at times advertise new remedies by descriptions of successful experiments and biological tests, purporting to have been carried out in the firm's laboratories, which

have never been authoritatively reported and which it is impossible to repeat.

Even in a teaching hospital like our own, a regrettable amount of money is spent on secret or irrational proprietary preparations. This is not only a great expense to the hospital, but a bad training for its students, many of whom will later be required to prescribe within the narrow financial limits of the health insurance system and should therefore be taught as early as possible that they can get better results from the inexpensive pharmacopœial drugs. The physician who uses a secret remedy belittles himself and his profession. Before using a new drug, you should know—

1. that it is of known chemical composition and assay;
2. that its action on experimental animals has been studied;
3. that it is worthy of carefully controlled clinical trial.

Many proprietary preparations would never be bought if physicians would only take the trouble to ascertain their chemical composition. The list of new and expensive preparations supplied to the wards and out-patient department last year contains many items which are open to this criticism. It would surely have been better to prescribe a pharmacopœial preparation of calcium, rather than the uncertain mixture of calcium carbonate and phosphate, which was bought at an exorbitant price as Tricalcine. Nor can one feel that the hospital made a good bargain in spending £15 10s. on Idozan in the second half of last year. Idozan was "not accepted" by the American Council of Pharmacy in 1926 because of its indefinite composition. It is stated to be a colloidal preparation containing 5 per cent. of iron. Clark has shown that it is hardly possible to produce colloidal preparations of this nature. Nor is there any evidence that colloidal preparations of iron are in any way superior to the scale preparations. The cost was 10s. per litre, or 10s. for 50 grams of iron. Iron and ammonium citrate, a pharmacopœial drug of proved efficacy, costs 4s. 3d. per pound, or about one-twentieth of the price. Idozan is therefore an example of what has been called "silvering a penny to pass for a dime." The cost is not its only disadvantage. The dose is given as 1 to 4 drachms, or about 5 to 15 grains of iron. It is often necessary to give large doses exceeding 100 grains a day to get the therapeutic effect of iron. This is easy with iron and ammonium citrate, but few people will feel justified in exceeding the maximum dose of a proprietary remedy. You must also think of the difficulties of the dispenser, who has not only to keep in stock the pharmacopœial preparations of iron (there are far too many), but also to clutter his shelves with idozan, ferrarin, iron cacodylate, Fraisse's serum, colloidal iron and whatever other expensive iron preparation may be fashionable.

The evaluation of methods of treatment is very difficult owing to errors in diagnosis, variations in individuals and the tendency of many illnesses to get better of themselves. Recently statistical methods have been applied to this problem and it is surprising how many cases must be treated and how great must be the difference between the treated and the control series to obtain scientific proof that a remedy is effective. The employment of new remedies is often taken as proof of the scientific spirit, but it more often shows an uncritical intellect. The more drugs you use, the less you will learn of the actions of any of them. Martindale and Westmacott contains details of some ten thousand drugs. The American Handbook of Therapy contains a list of only about three hundred useful drugs. Even these are far too many. An American physician gave a list which has since become immortalised under the name Dock's Thirty Drugs, and this is about the number the average man can learn to use.

As you acquire confidence and experience, you will be able to use powerful remedies like digitalis or strychnine in their effective dosage, which is much larger than the pharmacopœial dosage and which can only be approached when you have become thoroughly familiar with their toxic and therapeutic actions. Many other drugs such as the alkalies, ammonium chloride, calcium salts, belladonna, to mention but a few, only produce their characteristic effects, which may be real therapeutic triumphs, when they are given in large doses which are dangerous in inexperienced hands, and it is better to employ your time in acquiring skill in their administration than in flirting with meretricious proprietary remedies.

Although the advance of chemical and biological science is continually leading to the introduction of new drugs and new forms of treatment, many old remedies are at the same time proved useless and abandoned, so that medical treatment does not grow correspondingly complex. Since the introduction of dietetic treatment and insulin, we no longer use drugs like codeine, arsenic or salicylates in diabetes mellitus. Many of the more modern applications of physiology, such as the use of glucose in debility and infections, of alkalosis and acidosis in œdema, of saline solutions in dehydration of carbon di-oxide in asphyxia and pneumonia, are capable of a wide application and have greatly simplified therapeutics. Simplification has also come from the development of what may be called topical treatment or physiotherapy in many illnesses, above all the chronic rheumatic diseases,

which form such a large fraction of medical practice. Here we are dealing with a malady which is painful and often shows little tendency to spontaneous recovery. Patients have rapidly tired of being ineffectually dosed with salicylates, iodides, intestinal antiseptics, and the spate of colloids and aniline derivatives which are always recommended for incurable diseases, and have been quick to appreciate the more rational if cruder methods of the osteopath. The scourge of unqualified practice in this country is almost entirely the result of our own vices. It must always be remembered that therapy is more than drugs. Improvement in diagnosis and especially the recognition of the psychological origin of many disorders have much restricted the applications of drugs. You must not allow your surgery or out-patient clinic to degenerate into a chemist's shop or yourself to become a reflex animal, to whom dyspepsia means bismuth or palpitations digitalis. Functional illnesses have their ætiological factors just as much as organic ones and they can only be permanently cured by removing the cause. It is better, then, to spend a little more time on the history of your patient, when you may find it possible to cure him completely by disabusing him of some ungrounded fear or by dissuading him from unphysiological methods of contraception.

Much of your training is carried on under circumstances which are very different from those of actual practice. In the urgent conditions which are treated in the surgical wards drugs must often be given by injection, but it is a great mistake to carry this habit over into your ordinary work. Opiates should only be injected in emergencies or when less powerful remedies fail. It is your duty to relieve pain, especially in chronic and incurable diseases, but in the early stages analgesics like aspirin, phenacetin, acetanilide and pyramidon are sufficient. Alcohol is often of great service. Opium should be given by mouth before recourse is had to injection, for once injections have been begun you will find it very difficult to give them up, and the rapid acquisition of tolerance soon leads to practical difficulties in keeping the patient under the influence of morphia. When the patient begins to tolerate very large injections, it is possible to reduce the dose by changing to hyoscine for two or three days.

There is also far too great a tendency to inject drugs into patients with sudden heart failure. In anæsthesia the heart may fail in the early stages of the operation from ventricular fibrillation or in the late stages from paralysis of the cardiac muscle with respiratory and vasomotor paresis. It is much easier to see how harm can be done to a patient by hypodermic injections in these circumstances than to envisage any benefit. "The less the physician uses his apparatus for hypodermic injections on patients requiring resuscitation, the better. Reliance should be placed on the standard measures for resuscitation—artificial respiration by the prone pressure method, inhalation of oxygen and carbon di-oxide, measures to keep the patient warm, continuance of the recumbent position, and absolute rest till resuscitation is complete." The injection of adrenalin into the heart is particularly reprehensible and when patients afterwards recover, it is in spite of, and not because of, this procedure.

If the drug is injected into the muscle of the heart, it reaches a localised area only; if into the cavities, it is still remote from the active cardiac tissue. Grave harm may be done by the production of hæmo-pericardium or pericarditis. Intravenous injection of adrenalin is known to provoke dangerous cardiac irregularities.

An intravenous injection should have the same status in your thoughts as an operation and should not be embarked on any more lightly. Any substance injected into the veins acts as a foreign body and produces shock. It is no exaggeration to say that every kind of intravenous injection except normal saline has at some time or other proved fatal. The clearest indication for an intravenous injection is a depleted plasma volume. It is on this account that we use blood transfusion in hæmorrhage, infusion of gum acacia in shock, saline in diarrhœa, vomiting, diabetic coma and uræmia. The injection of hypertonic solutions in cases of increased intracranial tension is a closely related procedure. Attempts to alter the composition of the plasma are much more dangerous, for the balance of the various ions in the plasma is very carefully maintained and great harm may be done by disturbing it. Death has often been caused, for example, by the infusion of alkalies in diabetic coma. Glucose is the only substance which can be injected at all safely, though calcium salts or alkalies may be advisable in certain emergencies; these solutions should be injected very slowly. A third indication for intravenous therapy is provided by drugs such as the organic compounds used for syphilis and tropical diseases and the mercurial diuretics, which can only be given intravenously. Finally, there are occasions when at all costs the patient must be brought rapidly under the influence of a drug, as when quinine is injected for cerebral malaria; but these occasions are very rare and you should never inject a drug, which can be given by mouth, unless it is absolutely necessary.

This is a fair summary of the indications for intravenous therapy, but it can give you no impression of the enormous extent to which the bad habit of intravenous injection has grown in recent years.

Mr. H. G. Wells refers in one of his novels to people whom he calls "For-Gawd's-Sakers." Whenever anything untoward or unpleasant happens, they say, "For Gawd's sake let's do something," and do it with little thought of the consequences. A fair sample of their activities as physicians is provided by the history of so new a disease as epidemic encephalitis. In the Matheson Commission's Report on this disease there are pages of description of the bizarre injections which have been used, for no apparent reason and certainly without good effect. It is possible to trace such injections as colloidal gold, silver and rhodium, to the mediæval belief that "gold in physic is a cordial" but one can see no other justification for them. Without going all through these pages, which you can read for yourselves as a corrective of therapeutic overenthusiasm at the patient's expense, I must refer briefly to the intravenous injection of chemical antiseptics.

The action of bactericidal compounds is not understood, but it is almost certain that they do not act by a direct sterilisation of the blood stream and tissues. Yet claims continue to be made for internal antiseptics as panaceas in acute general infections. It is known from experiments on animals that the injection of colloidal substances may temporarily increase phagocytosis and the bactericidal power of the blood, but the results are far from constant, and in experimentally infected animals the power to respond to this stimulation is lost as the infection advances. Such experiments explain the occasional brilliant results of intravenous antiseptics and the much more frequent catastrophes. To-day, the most fashionable of these preparations are mercurial derivatives, which are novel enough still to be eulogised by clinicians, but old enough to have been condemned by the majority of pathologists and researchers. It has been shown that the bactericidal power of the blood is not increased, but, if anything, diminished by them. There is no evidence that they in any way favourably affect the course of infections. In therapeutic doses they are regularly followed by damage to the liver and the kidneys. Why use them then?

Finally, I must refer to the very controversial questions of the use of sera and vaccines. With these there are not only the dangers inseparable from any kind of injection, but also the added risk of anaphylaxis and serum sickness. In 1924, Lamson collected data of 41 deaths which were attributable to the injection of serum. In this country the only sera which it is safe to use are the antitoxic sera, prepared for diphtheria, scarlatina, tetanus, gas-gangrene and meningitis. These have saved many lives. There is much lay prejudice against the use of sera, and you have no right to foster it by the use of sera which are inactive and dangerous. You are merely playing into the hands of the anti-vivisectionist. One example I would suggest is the use of horse-serum in hæmorrhage. It is not a powerful hæmostatic, it is not a rational treatment like blood-transfusion, and often the sole effect is to sensitise the patient to horse-serum. Another example is the injection of anti-streptococcus serum. Careful experiments and statistical reviews have shown that anti-streptococcus serum (as distinct from scarlatina antitoxin) is of no value in the treatment of streptococcal infections. I can only say that I think it is very wrong to inject anti-streptococcus serum when there is no evidence that it is effective. You expose your patient to the risk of an immediate serum accident, you may inflict on him the painful disease, serum sickness, in which the tortures of the cutaneous irritation and the swollen joints may be almost unbearable, and finally you sensitise him to serum so that his life may be imperilled in the hour of need, when it may be essential to inject a potent serum.

My own feeling about vaccines is that the only certainties about them are that they are of great value in the prophylaxis of diseases like smallpox, rabies, typhoid and diphtheria, and that they should never be used in the treatment of acute and generalised infections. Their employment in chronic and localised infections is still in an experimental stage and must remain so until we know more about the phenomena of allergy. Hektoen and Irons have recently studied the position of vaccine therapy in the United States. They show that from 1906, the date of Wright's introduction of vaccine treatment, the number of papers on vaccines in medical journals constantly increased, until it reached a formidable volume around 1912. From this time on, the interest in the treatment gradually declined, for the number of papers on vaccine treatment recorded by the Index Medicus shrank until to-day they form a small part of the articles listed. From a questionnaire of 1,000 physicians they found that furunculosis, acne, asthma, bronchitis and rheumatism were the only diseases in the treatment of which vaccines were still being used by any appreciable number. Good results were claimed in 50 per cent. of cases of furunculosis, 35 per cent. of bronchitis, and 30 per cent. or less of acne, asthma and rheumatism. I cannot describe these results as dramatically successful. These same physicians reported 140 cases of serious results of vaccine treatment. These took the form of violent reactions, aggravation of the existing malady, and lighting up of latent phthisis, and there were a number of deaths. It is interesting to note that 17 patients

developed asthma as a result of vaccine treatment, although they had never had a previous attack, and one patient died from the asthma so induced.

It is easy to adopt a position of therapeutic nihilism and to scoff at the mistakes of others, but I have tried not to do so, and have referred to the numerous active remedies which are at your disposal and which it is your duty to use. It is just as wrong to let your patient die of cardiac muscle failure because you are too afraid or ignorant to give full doses of digitalis as it is to kill him with injections of strophanthin. Serious diseases may require drastic remedies, but do not let them be too drastic. There is a clear distinction between legitimate experiment and ordinary treatment. A famous physician, when accused of starving his diabetic patients to death before the days of insulin, replied, "Yes, but they died cured of their diabetes." An odd answer, but not without justification from a man who is doing pioneer work. If you are in a position to treat a large number of cases of pneumonia, you are entirely within your rights in treating a well-controlled series by a new and unorthodox remedy as long as you are familiar with its chemical composition, toxicity and rationale. If, on the other hand, in the ordinary course of practice you are called to treat a case of pneumonia, you are quite wrong to use a new and unorthodox remedy and you are not justified in drawing any conclusions about it, whether your patient dies or recovers.

I am far from discouraging you from experiment, but it is essential for you to realise the differences between treatment and experiment. In the ordinary course of treatment the only limit to the remedies you use is their compatibility. In research, there must be as few variables as possible, and once the basic conditions of your experiment have been formulated, they may not be deviated from in any individual instance. The history of digitalis in heart disease, of iodine in goitre and of liver in Addison's anæmia, shows how long a remedy may be in our hands, how long it may be used in the treatment of disease, how long its value may be unappreciated in the uncontrolled conditions of ordinary practice, and how rapidly its value may be established by careful experiment.

Speed

I SAT upon the bench outside the wayside inn drinking in the peace and beauty of the countryside. My dog lay at my feet dozing or snapping at the flies which tickled his ears. Bees hummed in the honeysuckled porch beside me and the silence of the country was broken by the gentle sounds of distant husbandry, for the haymakers were busy in the fields. The dusty road, flooded with June sunshine, pursued its curling way between high hedgerows. My wandering, nameless thoughts were abruptly brought to more material matters by the buxom, red-faced landlady who appeared from the porch and set before me a pot of beer, generous portions of cheese, farm butter, bread and home-made pickles. Lunch fit for a king!

"You'll not forget my dog, Mrs. Durdles?"

"As if I should then! I be getting him biscuits and water, sir, and a tidy bone too, for he has walked further than you with his running to and fro."

We ate and drank well, did Jock and I, for twelve good miles by the map had been our tramp that morning. I called for another pot of beer and lit my pipe being unwilling to take my leave. As in a dream I became aware of a distant hum which swelled in volume and became a noise, hideous, foreign to the fields and the songs of birds. I shuddered and my wrath rose within me for I knew that that explosive clatter would shatter the heaven-born peace and bring in its train a cloud of dust and a nauseating oily smell. I left my seat and calling Jock to heel, sought the refuge of the cool oak-timbered tap room thinking to escape the pestilence that was to burst unwelcome upon the scene. Escape? Merciful heaven! Instead of passing the "Jolly Miller" by, the authors of the disturbance stopped and propping their machines against the wall entered the tap room with heavy tread. There were three of them, two men and a girl who had been riding on the pillion of one of the motor cycles.

They were strangely clad. The men wore leggings to their hips, leather overcoats and woollen mufflers; Oh June! Sweet, sunny nymph, canst bear such a sight? Their faces, utterly barren of any expression or intelligence and coated with dust and sweat were partly concealed by goggles and surmounted by silly little caps such as are in vogue amongst some who go down the Swiss mountains on skis. A yachting cap would have been as appropriate and far smarter. The girl, already busy with lipstick and powder-puff, affected grey flannel trousers and a short leather coat. Diana, sweet goddess, fly back to Olympus! They ordered a concoction of gin and Italian wine.

"Not bad going," said one, "we did the last twenty miles in twenty-six minutes!"

I started at the words, for as they fell upon my ear I felt a nudge at my elbow.

"Forgive me, kind sir, but tell me who are these?"

I turned to the Shade and saw a personage who had been great two hundred years ago. There he sat with sword and periwig complete.

"Sir," I said, "these are modern youths who love to call themselves sportsmen!"

"Do they, forsooth? Know they aught of arms?"

"Arms? Great heavens, no! The need for arms has gone. Duels, battles, war—all are no more."

"Egad, sir! It pleases you to jest! It may be well that war is dead, but skill in arms and horsemanship are manly pastimes and noble to boot. How do these coxcombs sustain the prestige of our country? Do not the Frenchmen and the Lowlanders laugh at us?"

"Ah, sir, speed is the spirit of this age. It is a god at whose shrine sacrifices—aye, human sacrifices are offered. Men of business are the priests. They offer great wealth to men of spirit to risk their lives in a machine of their construction that a world's speed record may be broken and a new one set up; they tell such men that by so doing, other nations will bend their knee to us. There is guile in their hearts for their object is merely to bring their machine before the eyes of all men that their sales may rise. 'Advertisement' we call it. Speed and advertising have run through the land like plagues. The country's industrial plight and her other vital problems are neglected. Our capacity for speed, they say, will uphold our prestige in the eyes of the world and so our old time power is allowed to sicken and die a victim of the disease. Hundreds of thousands of pounds are spent on machines in efforts to snatch the speed records from the New World!"

"Odd's Life, sir! Are such men fools or knaves that they perceive not their iniquity?"

"They are both, sir!"

I looked up in time to see the trio depart, and as they did so I heard a sigh at my elbow and found that the Shade had vanished. I strode out into the sunshine and away across the fields seeking the peace of God which had gone from me.

E. A. R. B.

The Terror of the Machine

By R. C. Brock, Esq., F.R.C.S.

THE above title is a chapter heading taken from Henry Ford's auto-biography "My Life and Work." The whole book is intensely interesting and contains the expressions of Mr. Ford's considered philosophy of life set out from every point of view. This particular chapter deals chiefly with the position of the employee, and particularly with the relative ability of a workman to earn an adequate living wage.

The question of compensation and the question of the sort of work a man is fit to do is repeatedly coming before us and it is clearly of great value to be able to read the views of an employer of labour of such vast experience as Mr. Ford. Moreover, his ways of looking at the question are original and stimulating; they do not stop short at expressions of views, but have been projected into actual practice.

The key-note of the Ford business is service to the customer; everything is ordered so as to produce the utmost efficiency in this direction. The customer comes before all else, and the best way in Mr. Ford's opinion to ensure this is to produce a really reliable machine which is well within the reach of almost everybody. The only way to achieve this low price is by mass production and the utmost economy in every stage of manufacture. One's conception of mass production is of something stereotyped; but apparently nothing is more changing than the processes in the Ford factory. Every step, every process, is rigidly and continuously scrutinised, and although it would scarcely seem possilbe, every year fresh economies are effected.

At the same time, however, no economy is practised at the expense of the employees' earning power. Wages, as a matter of fact, have already risen, and at the time of writing the book there was a general minimum rate of six dollars per day: with very few exceptions (where certain conditions were not fulfilled), every man in the factory earned at least 25s. per day.

At the present time there are 50,000 men employed at the highest point of production of around 4,000 cars per day! How successful has been his policy of eliminating wasted energy and inefficiency of method is seen by the statement that if the same number of men were employed per car as in the year 1903, the total employees would number 200,000 instead of 50,000.

This remarkable diminution in man-labour per car has been attained in great part by installing the most efficient and up-to-date machinery possible for every step in manufacture. Again, the policy has been to make the machine do the skilled part and the laborious part of the work; there has been a constant elimination of the human element and at the same time it has been possible

to employ less skilled men and also many men who are not necessarily of A1 fitness. The obvious criticism of the method is the soul-killing nature of work that requires a thoughtless repetition of action. Ford, himself, admits that if he had to do the same thing all day and every day he would expire; but, he says, the great majority of the men prefer it. They have a different mentality. If they are tired of their particular job, all they have to do is to report to the employment bureau and ask for a change; in actual practice one of the most unpopular things to do in the factory is to try and relieve the monotony of always doing the same job.

These preliminary remarks have been made to give a general impression of the principles governing work in the factory, it suffices now to set down in Mr. Ford's own words the part which is of particular interest to us.

"No one applying for work is refused on account of physical condition. I think that if an industrial institution is to fill its whole role, it ought to be possible for a cross-section of its employees to show about the same proportions as a cross-section of a society in general. We have always with us the maimed and the halt. There is a most generous disposition to regard all of these people who are physically incapacitated for labour as a charge on society and support them by charity. There are cases where I imagine that the support must be by charity. As, for instance, an idiot. But those cases are extraordinarily rare, and we have found it possible, among the great numbers of different tasks that must be performed somewhere in the company, to find an opening for almost anyone. The blind man or cripple can, in the particular place to which he is assigned, perform just as much work and receive exactly the same pay as a wholly able-bodied man would. We do not prefer cripples —but we have demonstrated that they can earn full wages.

It would be quite outside the spirit of what we are trying to do to take on men because they are crippled, pay them a lower wage and be content with a lower output. That might be directly helping the men, but it would not be helping them in the best way. *The best way is always the way by which they can be put on a productive par with able-bodied men.*

We are too ready to assume without investigation that the full possession of faculties is a condition requisite to the best performance of all jobs. To discover just what was the real situation, I had all of the different jobs in the factory classified to the kind of machine and work—whether the physical labour involved was light, medium, or heavy, whether it was a wet or a dry job, and if wet, with what kind of fluid; whether it was clean or dirty; near an oven or a furnace; the condition of the air, whether one or both hands had to be used; whether the employee stood or sat down at his work; whether it was noisy or quiet; whether it required accuracy; whether the light was natural or artificial; the number of pieces that had to be handled per hour; the weight of the material handled; and the description of the strain upon the worker.

It turned out at the time of the inquiry that there were then 7,882 different jobs in the factory. Of these, 949 were classified as heavy work requiring strong, able-bodied and practically physically perfect men; 3,338 required men of ordinary physical development and strength. The remaining 3,595 jobs were disclosed as requiring no physical exertion and could be performed by the slightest, weakest sort of men. In fact, most of them could be satisfactorily filled by women or older children. The lightest jobs were again classified to discover how many of them required the use of full faculties, and we found that 670 could be filled by legless men, 2,637 by one-legged men, 2 by armless men, 715 by one-armed men and 10 by blind men. Therefore, out of 7,882 kinds of jobs, 4,034—although some of them required strength—did not require full physical capacity. That is, developed industry can provide wage work for a higher *average of standard men* than are ordinarily included in any normal community. If the jobs in any one industry or, say, any one factory, were analysed as ours have been analysed, the proportion might be very different, yet I am quite sure that if work is sufficiently sub-divided (sub-divided to the point of highest economy), there will be no dearth of places in which the physically incapacitated can do a man's job and get a man's wage. *It is economically more wasteful to accept crippled men as charges and then to teach them tasks like the weaving of baskets or some other form of unremunerative hand-labour, in the hope, not of aiding them to make a living, but of preventing despondency.*

When a man is taken on by the Employment Department, the theory is to put him into a job suited to his condition. . . . Those who are below the ordinary physical standards are just as good workers, rightly placed, as those who are above. For instance, a blind man was assigned to the stock department to count nuts and bolts for shipment to branch departments. Two other able-bodied men were already employed on this work. In two days the foreman sent a note to the transfer department releasing the able-bodied men because the blind man was able to do, not only his own work, but also the work that had formerly been done by the sound men.

This salvage can be carried further. It is usually taken for granted that when a man is injured he is simply out of running and should be paid an allowance. But there is always a period of convalescence, especially in fracture cases, where the man is strong enough to work, and indeed, by that time usually anxious to work, for the largest possible accident allowance can never be as great as a man's wage. We have experimented with bed-ridden men—men who were able to sit up. We put black oilcloths or aprons over the beds and set the men to work screwing nuts on small bolts. This is a job that has to be done by hand and on which 15 to 20 men are kept busy in the magneto department. The men in the hospital could do it just as well as the men in the shop and they were able to receive their regular wages. In fact their production was about 20 per cent. above the usual shop production. No man had to do the work unless he wanted to. But they all wanted to. It kept time from hanging on their hands. They slept and ate better and recovered more rapidly.

No particular consideration has to be given to deaf and dumb employees. They do their work 100 per cent. The tuberculous employees—and there are usually about 1,000 of them—mostly work in the material salvage department. Those cases which are considered contagious work together in an especially constructed shed. The work of all of them is largely out of doors.

At the time of the last analysis of employed there were 9,563 sub-standard men. Of these, 123 had crippled or amputated arms, forearms, or hands; one had both hands off. There were four totally blind men, 207 blind in one eye, 253 with one eye nearly blind, 37 deaf and dumb, 60 epileptics, 4 with both legs or feet missing, 234 with one foot or leg missing. The others had minor impediments."

A Landsman's Glossary of Nautical Terms

THE recent retirement of Dr. Herbert French from the Staff of the Hospital, while causing the regret of all who loved the name of Guy's, was especially deplored by members of the Hospital Sailing Club, of which he was Commodore for many years. He has always been famous for his love of detail.

He was peculiarly remarkable for his ability to catalogue *ex tempore* long lists of symptoms, signs, differential diagnosis or points of treatment, and his classical contribution to medical science was but an example of the clarity of his mind, which he chose to display by confining himself to the classification of symptoms.

Dr. French, since his retirement, has devoted himself to his hobbies, of which, perhaps, the greatest was sailing, and he, here, has compiled a list of his seafaring terms which are in common daily use in ordinary everyday language.

Dr. French says in his preface to the list: "I do think that interest might attach to the many sea terms that are used by landmen in ordinary conversation, often without there being any consciousness on the part of those who speak, that the words they are using have come direct from seafaring men. Other occupations have contributed to the language we commonly use; but I have been much struck by the large number of seafaring terms that have become part of the landsmen's mode of expression. I should greatly appreciate the help of others in an attempt to make the list complete."

1. It was all plain sailing after that.
2. She had everything trim and ship-shape.
3. He's got a very comfortable berth now.
4. She was rigged out all in her best.
5. Never interfere with the man at the wheel.
6. He completely lost his bearings.
7. It was a case of sailing very near the wind.
8. He seemed to be all at sea about it.
9. It was just touch and go.
10. It wasn't easy to fathom what he meant.
11. He found his brother absolutely on the rocks.
12. The company was handicapped by having so much leeway to make up.
13. It was all he could do to stem the tide of his troubles.
14. I sounded him carefully first.
15. Any port in a storm.
16. Half seas over.
17. What is the drift of all this?
18. He was very much under the weather.
19. He mapped out his course and stuck to it.
20. The Bill had a stormy passage through the House.
21. He was a good bit out of his reckoning.
22. The chairman always steered straight for his object.
23. He brought his mother in tow.
24. He was always on the look-out for a better job.
25. The company managed to ride out the storm.
26. We were all in the same boat.
27. He made a splendid skipper of the team.
28. He was drifting helplessly on the rocks.
29. The tide of his affairs was on the flood.
30. He was waiting to find out which way the wind was blowing.
31. What bearing has that got on the question?
32. He thought he had found out, but he was on the wrong tack altogether.
33. By jove, they were a rum crew.
34. Experts believed that share prices were now bumping on the bottom.
35. Though he lost, he went down with his colours flying.
36. She poured oil on the troubled waters and stopped the quarrel.
37. Even when he had to go under for a time he always bobbed up again.

38. He got a good bit out of his course.
39. That was the rock that wrecked his schemes.
40. What you said just now took me completely aback.
41. The chairman of the committee was a mere figurehead.
42. One's always got to take the rough with the smooth.
43. If you do that, just you look out for squalls.
44. He kept straight on, never seeing the breakers ahead.
45. He was very good at spinning a yarn.
46. There wasn't enough room to swing a cat in.
47. He took all the wind out of my sails.
48. It was some time before he showed us his true colours.
49. The rats were leaving the sinking ship.
50. He was losing ground all the time.
51. The company was doing badly and had to jettison some of its directors.
52. The scheme failed because there was so much top-hamper.
53. He made it his business to pilot the Bill through.
54. It was a long pull before we achieved success.
55. It took a long time, but ultimately we got the concern into smooth water.
56. The fortunes of the game ebbed and flowed.
57. After that we had a fair wind all the way.
58. He said he felt in very good trim this morning.
59. He was gaining ground over his rivals all the time.
60. There was a tremendous lot of lost ground to make up.
61. She was just drifting about with the tide.
62. We got along at a spanking rate after that.
63. He already had a pretty full cargo on board.
64. The whole of the scheme had to be thrown overboard.
65. She blew into the meeting with all her canvas set.
66. The party would get on much better if they all pulled together.
67. In the end he simply had to strike his flag.
68. Full steam ahead.
69. The plan was perfect from stem to stern.
70. She came in with her two children in her wake.
71. He was a regular old hulk.
72. So the two got spliced.
73. He's no good; he's only a fair-weather jack.
74. I simply could not fathom his meaning.
75. I didn't like the cut of his jib.
76. Poor old man, he was completely on his beam-ends.
77. I miss him dreadfully, he was my sheet anchor.
78. She was like a ship without a rudder.
79. He was an unsteady fellow, totally lacking in ballast.
80. The business was undermanned and could not carry on.
81. The fortunes of this company are just scraping along the bottom.
82. Leave it alone, and it will all blow over in time.
83. He found that he was getting into rather deep water.
84. He wasn't telling the truth, he was sailing under false colours.
85. What a pretty girl, I call her a really trim little craft.
86. It took him some time to find his sea-legs.
87. He seemed to be all adrift.
88. That was the main sheet of the whole affair.
89. He was going out with the ebb.
90. He went bankrupt, and became a human derelict.
91. It wasn't easy to keep a level keel under the circumstances.
92. Hurry up, it's time we got under way.
93. He pirated some of the things he wrote.
94. The bell-pull came adrift in my hand.
95. She was completely carried away by her feelings.
96. Whatever are you driving at?
97. When he retired he took up his final moorings at Worthing.
98. He was a real old stick-in-the-mud.
99. A stern chase is a long chase.
100. Time and tide wait for no man.
101. Right in the teeth of the wind.
102. There are as good fish in the sea as ever came out of it.
103. Grog.
104. Stowaway.
105. Flotsam and Jetsam.
106. All hands on deck.
107. It's an ill wind that blows nobody any good.
108. Fore-sheets in the wind.
109. Clear the decks for action.
110. Hand over fist.
111. That's bilge.
112. Stow that.
113. They were simply swamped by the letters that came in reply to the advertisement.
114. In spite of their precautions the news leaked out somehow.
115. The company foundered for lack of proper guidance by the directors.

Correspondence

"P.R.D." Cards

To the Editor of the GAZETTE.

SIR,—I apologise for so soon writing to you again, but I have long thought that the hardy annual complaint to the Staff on P.R.D. cards needed some reply and as I belong to a department that Ex-Dresser did not patronise, I may be a suitable person to make one.

If I remember rightly it was in 1907 or 1908 that the P.R.D. cards came into being. O.P.O.'s or Dressers saw cases in which they were specially interested, because they had been puzzled as to the diagnosis; they, therefore, asked members of the staff whether they would mind jotting down a note on the back of the card of such cases, to say whether they agreed with their diagnosis or not; and someone suggested P.R.D.—please return diagnosis—as a suitable code to indicate those in which they would like an answer. The essential points were that the dresser first made a diagnosis, and that it was worded in such a way that an answer was possible. Incidentally cards were few and far between, say two a day per dresser.

Nowadays, there must be some dressers, I think, who imagine the letters P.R.D. have to be put on every card and can have no idea what they mean.

As one who tried for years to arrange for all P.R.D. cards to be sent back, that is the only explanation I can give to account for the way in which they are now sent up. It is almost an exception to get one without these letters on ; and in the majority of cases no diagnosis has been made to which a return can be sent. Let it be remembered that the idea is to return the O.P.O.'s or Dresser's diagnosis confirming it or correcting it if necessary. When the dresser makes no diagnosis he should not expect a reply. One gets such cards as the following—" spitting up blood," without any indication that an attempt has been made to consider whence it came ; " Otorrhœa," without any indication as to whether the dresser wants help in the diagnosis between an acute otitis media and mastoiditis, or between a skin lesion of the meatus and a chronic suppuration of the middle ear. One often gets cards " For Ts. and As." without any indication that the dresser has considered why he advises the operation. If dressers were to fill in their cards more carefully, these recurring complaints might be heard less often.

On the whole, I am surprised that Ex-Dresser got so many back—I should say that over 60 per cent. is more than " only slightly over half," and so will he if he gets that number of marks in an examination. If one considers that some surgery cases never come on to O.P.'s, that in a large number of cases no certain diagnosis can be made on the first day the patient arrives there, and that many of the requests are quite unanswerable, I should call it a high percentage of returns.

I believe that all the staff are out to help the students ; but the latter should remember that the amount of work that has to be done at O.P.'s is far greater than there is time in which to do it in the way that they would wish, and that even filling in P.R.D. cards is an added tax upon their energies in that time. If there were about a quarter of the present number sent, and the diagnosis in these had been well thought out, it is probable that a higher educative value would be gained from the system.

Yours, etc.,
T. B. LAYTON.

19, Queen Anne Street,
W.1.

Delay in Surgery

To the Editor of the GAZETTE

SIR,—I am very grateful to Mr. Northfield for his comments on my clinical lecture, "Delay in Surgery," and agree fully with the criticism he makes. After reading my remarks in cold blood, I feel certain that I should have explored such a case as I described. I had in mind, when I was speaking, several cases in which operation had been carried out unnecessarily because the diagnosis of osteomyelitis had been made on insufficient grounds, and I was careful to say that " we should operate as soon as we are faced with a certain or even a presumably correct diagnosis." When, however, I came to review the proofs, I had a strong inclination to cut out that paragraph, and wish now that I had done so. If any real doubt remains after all the available facts have been carefully reviewed, it is undoubtedly wiser to trephine the bone than to wait even for a few hours.

Yours, etc.,
W. H. OGILVIE.

105, Harley Street, W.1.

A Text-book of Hygiene—A Review

To the Editor of the GAZETTE.

SIR,—At your request I reviewed a Text-book of Hygiene by J. R. Currie, M.B., M.D., D.P.H., etc., in a recent issue of this *Gazette* (No. 1095). As frequently happens, in a hasty first reading of a large text-book, I formed hesitant, unreliable conclusions.

Since writing this lukewarm review, I have had cause to study the book with more care, and now wish to apologise to Dr. Currie for such scant praise.

The book is definitely good and that largely because there has been such careful omission of information that students will have already acquired in other parts of their curriculum.

This has made it possible to add a considerable number of historical accounts and personal observations, which, though not essential, stimulate an unusual interest in an appalingly dry science.

Yours, etc.,
L. W. CANN.

Bacteriological Department,
Guy's Hospital, S.E.1.

Notice

ARTHUR DURHAM TRAVELLING STUDENTSHIP.

APPLICATIONS are invited for the Arthur Durham Travelling Studentship of the value of £100. Further particulars may be obtained from the Medical School Office.

Applications should be sent to the Dean, at the Medical School Office, on or before September 20th.

T. B. JOHNSTON,
Dean.

Reviews

Practical Midwifery for Nurses. By BETHEL SOLOMONS. Oxford Medical Publications. *Price* 8*s.* 6*d.*

THIS book should be of great value to the midwifery pupil and maternity nurse. Based on the teaching of the Rotunda Hospital, it clearly explains how to deal with the conditions prevailing in private practice. Special mention should be made of the chapters on Nursing Ethics, ante-natal care, abnormal pregnancy and abnormal labour; while the chapter on "The Infant" is an extremely useful one.

The illustrations and diagrams are most helpful, explaining the subject matter clearly, particularly those dealing with the various methods of resuscitation of the asphyxiated baby.

The book is concisely written, and covers all the ground necessary for a thorough knowledge and appreciation of the principles and ideals of midwifery.

Introduction to Midwifery. By MARY HAYES. Published by Messrs. Faber & Faber, Ltd. *Price* 4*s.* 6*d.*

THIS book should make a special appeal to the pupil midwife with no previous hospital training. It covers all the necessary anatomy and physiology simply written and illustrated by many helpful diagrams.

It contains also chapters on ante-natal care, drugs, and urine testing. With the exception of the two chapters dealing with the fœtal circulation and the duties of a midwife, the book is too elementary to be of value to the midwife with general training.

Hospital Information, etc.

Pass List

SOCIETY OF APOTHECARIES OF LONDON.

Surgery.

*N. I. Kronenberg. *W. M. Smith.

Medicine.

*N. I. Kronenberg. *W. M. Smith.

Forensic Medicine.

*N. I. Kronenberg. W. K. Schnarr.
*W. M. Smith.

Midwifery.

W. W. Parry. *W. M. Smith.

*Now holds Diploma.

Papers by Guy's Men

J. H. Badcock. The design of partial dentures considered in relation to the health of the oral tissues. *Proc. R.S.M.*, xxiii, 1457.

R. Brooke. Pelvic joints during and after parturition and pregnancy. *Pract.*, cxxv, 307.

S. H. Browning. Syphilitic diseases of the eye. *Brit. Jour. V.D.*, vi, 224.

N. Burgess. Epithelioma of the lip developing on the site of recurrent herpes simplex. *B.M.J.*, 1930, ii, 249.

G. B. Dowling. Acne agminata. *Proc. R.S.M.*, xxiii, 1485.

L. Forman. (1) Acnitis; (2) Hypodermic sarcoid, Darier-Roussy type. *Proc. R.S.M.* xxiii, 1486, 87.

J. M. C. Jacobs. Unusual position of supernumerary. *Brit. Dent. J.*, li, 984.

W. H. Jewell. Swelling below left malar bone with pain in front of left ear; case for diagnosis. *Proc. R.S.M.*, xxiii, 1414.

A. S. Landsler. Bilateral duplication of laterals. *Brit. Dent. J.*, li, 920.

E. G. G. Little. (1) Adenoma sebaceum, Pringle's type, with fibromata on trunk and scalp; (2) Lichen planus with lichen spinulosus and cicatrical alopecia of the scalp and pubes and axillæ; (3) ? Parapsoriasis en plaques, case for diagnosis; (4) Dermatitis artefacta. *Proc. R.S.M.* xxiii, 1488, 89.

K. W. Mackenzie. Swelling of naso-pharynx and hard palate; case for diagnosis. *Proc. R.S.M.* xxiii, 1411.

J. C. McNeill. True anchylosis in human tooth. *Brit. Dent. J.*, li, 961.

E. A. Peters. (1) Hæmoptysis due to cryptal ulceration of tonsils; (2) Section of papilloma removed from left aryteno-epiglottic fold by direct method. *Proc. R.S.M.*, xxiii, 1413, 14.

R. P. Rowlands. Goitre, operation under twilight sleep and local anæsthesia. *Clin. J.*, lix, 397.

G. F. Still. Congenital anorexia. *Pract.*, cxxv, 49.

E. C. Warner. Advanced Banti's disease treated successfully by ligature of the splenic vein. *Proc. R.S.M.*, xxiii, 1405.

F. W. Widgery. Henock's purpura requiring surgical intervention. *B.M.J.*, 1930, ii, 249.

G. V. L. Williams. Lower third molar with two crowns. *Brit. Dent. J.*, li, 919.

Change of Address

C. G. Townsend, M.B., B.Ch., "Mobray," Beaconsfield, Bucks. *Beaconsfield* 190.

Marriage

LANE—OUTRAM—On July 3rd, 1930, R. E. Lane, M.B., B.S., of Midsomer Norton, Somerset, to Janet Outram, of Port Dinorwic, North Wales.

EDS. {P. M. F. B. / P. V. R.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *20th September* 1930 *Number* 1100

PASSIM

IN the early part of this year two lectures were given in this country by Professor John Murdoch, head of the Clinic of Radiology in the Faculty of Medicine at Brussels University, epitomising the statistics of the radium treatment of cancer at the present day. These statistics, were all derived from the work of the Brussels clinic, and the information gained represented, to our minds, a singularly valuable contribution to a comparatively recent, and hence, still essentially experimental, sub-division of modern surgical treatment.

We are almost guilty of an aphorism when we express the opinion that radium having gone through the phase of insane popularity is now entering upon that reactionary period of doubt. For this reason it is, we should imagine, essential that every effort should be made to submit radium to the most judicial examination possible, and that the only way to do so would be to keep extremely careful and detailed records of all cases in this country treated with radium. We should, therefore, expect to see in—for example—an institution like Guy's Hospital, records kept with strict and detailed uniformity, which records should be subsequently analysed and the results either published annually, or else put in the hands of some central radium authority. We would imagine that those responsible for the administration of the King Edward Hospital Fund Grant might issue printed report forms to encourage uniformity.

Instead, we find the curtest jottings on the bed letters by the house officers, and the most bewildering and useless accounts in the more conscientious ward clerks' reports. True, a full account of the amount of radium implanted in the patient with the date of its return is kept by Sister Radium, but the site of irradiation, the relative position of the needles, the size of the growth, and the progress of the case are not her concern.

Radium is, as we have said, fortunately, gradually finding its proper level in the general scheme of surgical treatment, and if there are some of us sceptic enough to refuse to regard it as a panacea for all malignant evils, that is surely no reason why we should treat it as though it were merely a new and extravagant toy. After all, it did cost a lot of money, and even though there are very few of us at Guy's who know anything about its use, there is no reason why we should not try to learn something by making conscientiously our own statistics concerning its use.

WE have been much intrigued recently by the excavations in progress at the back of the Massage Department. Could it be that Guy's was erecting a searchlight in friendly rivalry with St. Bartholomew's Hospital, to see which hospital could most faithfully imitate summer lightning? Could it be hidden treasure? Was it a heliotherapeutic enclosure with perhaps a miniature Lansbury's

Lido, or was it merely drains? Our doubts were, however, to some great extent dispelled, for we intercepted a rumour to the effect that a small general stores was in the process of establishment, where patients, and perhaps others, might buy cigarettes, tobacco and other small sundries.

We understand that the formal opening of the Winter Session will take place on Tuesday, October 7th, at 3 p.m. The School has been fortunate enough to persuade Lord Moynihan of Leeds, to give the opening address and to distribute the prizes, and it is hoped that there will be a large attendance of staff and students.

Glandular Fever

A Clinical Lecture delivered at Guy's Hospital by Dr. A. H. Douthwaite

DEFINITION

GENTLEMEN,—Glandular fever is an acute infectious and contagious disease characterized by a rapid rise of temperature, enlargment of the lymphatic glands, and an absolute and relative lymphocytosis.

AGE INCIDENCE

Although principally a disease of childhood, it is by no means confined to this age. Of the 28 cases which I have seen, 20 occurred between the ages of 4 and 14 years. The remainder were aged 16, 18, 19, 24, 29 and 32 years. Eight were Jews.

MODE OF INFECTION

The disease is presumably due to infection by a living organism, and the constant implication of the cervical glands suggests the upper respiratory tract as the portal of entry. This is, however, pure supposition.

The infectivity is not great: cases admitted to general wards do not appear to endanger the other inmates. During an epidemic, however, it is exhaled and may result in rapid spread through an institution.

HISTORICAL

Filatow of Russia in 1885 was probably the first to present a description of its clinical manifestations, but it was not until three years later that Pfeiffer recognised it as a distinct malady and described its salient features, including the tendency to spread as a house epidemic. Since then reports of outbreaks of glandular fever have been made from time to time up to the present year in which an epidemic in London aroused fresh interest in the condition.

The disease is, I believe, by no means uncommon, but has been regarded by many as a rarity owing to the majority of cases, particularly those of sporadic nature, having been overlooked. In the early summers of 1926 and 1927 I came in contact with two epidemics at schools, and once having recognised the condition as glandular fever, I had no difficulty in picking out of my case notes of previous years several examples of the same illness which, owing to their isolated nature and transient symptoms, had remained as unclassified cases of generalised adenitis. This has probably been the experience of others, but now that attention has been rivetted on the disease we shall probably find that glandular fever is always with us, though from time to time presenting itself in localized epidemics.

The majority of cases arises in the spring and summer months, more especially in houses where close contact between several children is habitual, *e.g.*, schools.

INCUBATION PERIOD

The incubation period could be determined in five of my cases and varied from 6 to 8 days; it is probable, however, that it may be as long as 12 days.

PRODROMAL SYMPTOMS

Symptoms prior to the onset of fever are usually very short-lived, but in all reported epidemics a few children have been observed to lose appetite and energy and to complain of evening and morning headache for periods up to three weeks. Usually, however, the child sickens at bed-time, and is feverish by the next morning.

ONSET

Glandular fever is ushered in by slight headache, aching in the lumbar region, neck and thighs, transient nausea and often slight epistaxis. On the first day the evening temperature is in the region of 99.6-100° F., the pulse being correspondingly accelerated.

COURSE OF THE DISEASE

Within two or three days, sometimes even on the first day, swelling of the cervical glands is noticeable. The enlargement is rapid, reaching its maximum by the fourth day and accompanied by slight pain and tenderness. Commonly unilateral at the commencement, the adenitis involves the opposite side within 24 hours, the first glands to be swollen lying deep to the middle of the sternomastoid, and spreading upwards towards the angle of the jaw. In well-marked cases the swelling may eventually form a collar about the neck and extend to the occipital and pre-auricular regions. The salivary glands are never involved. Throughout the disease, except when suppuration threatens, the glands are firm and discrete. Individually they may reach the size of a pigeon's egg, and as a general rule I have found that the larger the masses the greater their tenderness.

In the vast majority of patients cervical swellings precede those in the axillæ and groins which may, in fact, be completely spared. In the event of enlargement of the axillary glands, they never attain the size of those in the neck, whilst those of the groin are still less affected. All three positions may be involved within twenty-four hours.

Enlargement of the bronchial and mesenteric glands undoubtedly takes place at times. Thus a girl of eight years whom I attended developed a cough on the fourth day of the illness. On the fifth day there was impairment of percussion note and air entry at the right base, and on the day following the heart was found to be displaced towards the right side. The signs cleared up in twenty-four hours coincidentally with commencing subsidence of the cervical swelling and pyrexia. Similar reports suggesting bronchial obstruction from enlarged glands have been made by other observers.

Mesenteric involvement no doubt accounts for the not infrequent attacks of sharp abdominal pain which may occur at the height of the disease. The discomfort is of colicky nature at or below the umbilical level. Tidy has actually palpated these enlarged glands which were found to be tender.

Partial subsidence of glandular enlargement occurs at about the end of the first week, but in many cases it may not be observed before the 10th-14th day. For many weeks or months afterwards the glands remain abnormally large, particularly those of the neck.

Enlargement of the spleen is a feature much stressed in the text-book accounts of glandular fever. I would, however, impress upon you the fact that a palpable spleen is decidedly uncommon. It is most likely to be felt on the fourth or fifth day and then only at the end of full inspiration. In the majority of cases splenic swelling can only be surmised from percussion, at the best an inaccurate mode of investigating the size of this organ.

Although it is probable that splenic enlargement occurs in the majority of cases, I have purposely excluded it from the definition of the disease, as its absence has led many to doubt the accuracy of unquestionably correct diagnoses.

In uncomplicated, but well-developed cases, the temperature attains 102-103° F. by the third or fourth day and persists at this level with daily variations of about 2° F. for four days. Thereafter it falls by lysis until by the tenth day the morning temperature is normal, the evening reading being perhaps 99° F. Within another two or three days the night temperature is also normal, but a peculiarity is the tendency for an evening rise to 99-99.6° F. every third or fourth day for a week or two.

The condition of the throat is one of considerable interest as an aid to differential diagnosis. Slight soreness may be complained of at the commencement of the illness, but in all but two of my cases this symptom was absent until the fourth or fifth day and then was of no great moment. Examination reveals dry, glazed and reddened soft palate, fauces and pharynx. The tonsils are commonly of normal size and exhibit no exudate. In five cases the usual appearances of follicular tonsillitis developed towards the end of the first week, but I think we should regard such signs as evidence of a complication of the disease and in no way ætiologically connected with it.

INCONSTANT SIGNS

Just as influenza has varying fashions in its manifestations in succeeding epidemics, so also glandular fever presents from time to time unusual features which render its recognition one of no small difficulty. For instance in this year's outbreak various skin rashes have been described, a phenomenon previously commented upon at the beginning of the present century, but not in the intervening period. Typhoid or even typhus-like spots, scarlatiniform rashes, urticaria, erythema multiforme and erythema nodosum are all mentioned in the literature, particularly the first two in 1930. Like most of the striking signs I have mentioned, the fourth or fifth day is the usual time

for their appearance, but it may be considerably later.

Obstinate constipation followed, with commencing defervescence, by diarrhœa and mucous stools was an almost constant feature of the earliest recorded epidemics, but has now ceased to be a noticeable symptom.

Slight enlargement of the liver may occur and when present is always associated with a palpable spleen. Both organs retreat beneath the costal margin by the end of the first week.

To my mind two of the most important, if inconstant, features of glandular fever are the complete absence of malaise, even with considerable pyrexia, and the occurrence of epistaxis.

It is probable that nose-bleeding is much more common than is generally supposed, having been overlooked owing to its frequently trivial nature. My attention was directed towards it by the first case of glandular fever which I diagnosed, and consequently I have asked for information on this point from each subsequent patient. 21 out of 28 of these had some degree of epistaxis. The mild ones occurred on the first or second day. The severe hæmorrhages (three cases) arose on the fourth day and persisted for three to five days. Furthermore, only these three patients felt really ill, this feeling preceding by 24 hours the onset of hæmorrhage. Tidy in 1921 quotes seven cases of epistaxis in 464 cases of glandular fever collected from the literature, but of these, four occurred in five patients in one family. As it is obviously improbable that a symptom would be confined to one house in the midst of an epidemic, we may justifiably argue that its frequent occurrence has merely been overlooked or thought unworthy of comment.

BLOOD CHANGES

These are of the utmost importance. A single count, particularly in the early days, may reveal no abnormality. By the fifth day the characteristic changes are well shown. There is no anæmia. The number of white cells varies from 7,000 to 30,000, usually 15,000. A differential count reveals a high percentage of lymphocytes: 49-65 per cent. or even 90 per cent. The cells are chiefly of the large type, the majority being atypical lymphocytes, larger than the normal cell, possessing relatively more protoplasm which may be vacuolated, and a nucleus which is often indented or bilobed. These cells are regarded as precursors of lymphoblasts. It is believed that they are passed into the blood stream owing to stimulation of the glands by the causative virus. At the height of the disease eosinophils are frequently absent, but in convalescence they rise to normal or even considerably higher.

RELAPSES

Relapse is infrequent and is most liable to arise in those in whom glandular involvement has been restricted largely to one side of the neck. The opposite side is then attacked with recurrence of the main features of the disease.

CONVALESCENCE

It is only in convalescence that anæmia of secondary type develops. Although seldom severe in degree it is very persistent and probably accounts for the lassitude experienced by recent sufferers. It is often six to nine months before a normal differential count can be obtained, mononuclear cells predominating even to 55 per cent. three months after the acute illness.

PATHOLOGY AND BACTERIOLOGY

Glands removed during life have proved sterile. They exhibit hyperæmia, sinuses packed with lymphoid and endothelial-like cells, many undergoing mitosis. It is possible that Bland succeeded in transmitting the disease from the blood of a patient to rabbits, but his results are not yet conclusive. All previous attempts at animal inoculation have been unsuccessful, possibly because guineapigs have been employed.

COMPLICATIONS

(1) Nephritis is stated to occur in 6 per cent. of well-developed cases of the disease. The incidence must be appreciably lower if one includes the mild and sporadic types. It occurs early in the illness, is hæmorrhagic in type and unassociated with œdema or other symptoms. Hæmaturia persists for a few days and then clears up, leaving no evidence of permanent damage in its wake.

(2) Suppuration of glands is believed to be yet rarer, yet I have been fortunate in observing two cases. In both, and in all those reported, the glands affected have been in the neck. The complication arises, as a rule, when the general adenitis is subsiding, one mass of glands remaining enlarged and becoming tender and matted. The temperature assumes the hectic type, and the blood reaction is normal, *i.e.*, a polymorphonuclear leucocytosis develops. In the two patients of this series, tonsillitis preceded the glandular sepsis which was probably secondary to it. In all cases, streptococci have been recovered from the pus.

DIFFERENTIAL DIAGNOSIS

(1) *Hodgkin's Disease* by the appearance in lymphadenoma of ill health by the time many glands are involved; the slow spread to different regions of the body; the blood count.

(2) *Mumps.*—Careful palpation of the swellings will immediately settle the point. The salivary

glands are never affected in glandular fever ; the angle of the jaw is, therefore, not buried.

(3) *Sepsis,* particularly in relation to tonsillitis. Here, however, the throat is obviously diseased and an early source of complaint. The child is more ill and the blood reaction is the result of a polymorph-leucocytosis.

(4) *Acute Glandular Tuberculosis.*—Apart from being very rare, the condition is always associated with prostration, rapid loss of weight, early fixation of the glands and swinging temperature. The blood picture is inconstant often exhibiting a polymorph increase.

(5) *Acute Lymphatic Leukæmia* may present considerable difficulty. Many cases believed to be this disease followed by recovery have been reported, but you will agree with me that these, and certain cases of so-called infective mononucleosis, were actually examples of glandular fever. I would not go so far as Tidy, however, in suggesting that all these instances of infective mononucleosis were actually examples of glandular fever. Certainly at least two of Cabot's patients produced a monocytic response to a true septic infection.

(The Lecturer then analysed certain examples reported in England and America.)

The most helpful points to remember are that in leukæmia the child is usually very ill : decidedly anæmic : there is a tendency to bleed : presents a fairly uniform enlargement of the glands, which is not great : the percentage of lymphocytes is commonly greater and many degenerate and fragmented cells are to be seen in a blood film. The length of history also is much greater for the degree of ill health and glandular swelling.

PROGNOSIS

The outlook is almost always favourable.

TREATMENT

There is no specific treatment. Epistaxis can be controlled by the application of ice to the nose and nape of the neck. Absolute rest must be insisted upon. Insomnia due to feverishness responds promptly to tepid sponging. Pain in the glands should be treated by large compresses of colloplasma or antiphlogistine. The throat should be painted with Mandl's paint which is soothing and probably lessens the risk of secondary tonsillitis.

Threatening tonsillitis or suppuration, as evidenced by a polymorphonuclear leucocytosis and the signs as described above, should be dealt with by the prompt intramuscular injection of scarlatinal antitoxin in view of the prevalence of the streptococcus in such complications (effect on temperature chart demonstrated). The diet can be liberal owing to the absence of malaise and digestive disturbances. For instance, fish, well-cooked vegetables and fruit, fruit juice, jellies, copious fluids, toast and butter are generally well tolerated.

It is essential that convalescence should be carefully watched. No child may return to school before the blood picture is again normal. Fresh air and good food, iron and arsenic are the requirements at this stage.

To present you with this brief summary of a disease of no small interest, I have been impelled by two considerations. In the first place there is as yet no adequate account of it in your text books, yet it is not improbable that the subject will loom up in the examination papers of the near future. Secondly, glandular fever is rarely seen at hospital, but frequently in general practice. Failure to recognise it may only too easily lead you to the committal of a diagnosis of one or other of the dread diseases which may ape it so closely.

Note.—The following literature is recommended to those working for the higher examinations :—

General Description of the Disease.—

(1) Das lymphaemoide Drüsenfieber. Glanzmann, E. Berlin, 1930. (Exhaustive treatise).
(2) Tidy, H. L. Brit. Med. Journ., 1921, i, 452 (Summary).
(3) Tidy, H. L. and Daniel, E. C. Lancet, 1923, ii, 9 (Summary).

Cases of Infective Mononucleosis and "Lymphatic Leukæmia" some of which have been confused with Glandular Fever—

(1) Hall, A. J. Proc. Roy. Soc. Med. (Med. Sec.) 1915, viii, 15.
(2) Sprunt, T. P. and Evans, F. A. Johns Hopkins Hosp. Bull. 1920, xxxi, 410.
(3) Cabot, R. C. Am. Journ. Med. Sc., 1913, cxlv, 335.
(4) Deussing, R. Deutsch. Med. Woch., 1918, xliv, 513 and 542.

Inoculation of Animals.—

Bland, J. O. W. Lancet, 1930, ii, 521.

Guy's Hospital Gazette

(ESTABLISHED 1872)

Published on Alternate Saturdays. Price 9d.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Arthur Brailey: A Recollection

HERE on this perfect summer day, by the sea close to where he was drowned with five other sea-faring comrades in the wreck of the Yacht "Islander" ten days ago during a storm of almost unprecedented violence, here let me record in the mood of the moment a few recollections just as they come to me of a very dear friend, about whom one cannot think without superlatives of regard and affection.

Arthur Brailey and I were contemporaries at Guy's nearly thirty years ago. He had then just come down from Cambridge and we first met as ward-clerks under Mr. Jacobson, after which we were much together. Mr. Jacobson had a great liking for Brailey and used to show his regard in that droll and delightful, if often embarassing manner of his, half earnest, half quizzical, before the large circle of students who always accompanied him on his ward rounds. "Now, Mr. Brailey," he would say, when some point in the classics arose as was often the case during "Pom's" teaching, "You who are straight from Cambridge (not my Alma Mater, sir) must tell us that; we are waiting to hear, sir, we are all waiting to hear." Then as Brailey, the most junior of ward-clerks, paused with all eyes directed upon him, he would look up at him over the gold rims of his glasses, as was his manner, and add:—"Don't be too modest sir, out with it, you who know more than any of us," for Brailey had come from Cambridge with a reputation.

"Pom" was fond, too, of referring to Brailey's father, then Senior Ophthalmic Surgeon at Guy's. He would say:—"You, Mr. Brailey, a worthy scion of your race," or "You, sir, the son of your father, a chip of the old block." As time went on Brailey grew accustomed to meet these sallies with some fine parry or gentle thrust in return, which greatly pleased the old man.

Those were delightful days indeed, for we all shared a devotion to our chief, who had, as I think no one else had at the time, a way of inspiring his "firm" with a personal loyalty and regard.

He was accustomed sometimes to reward his clerks with cigars for particularly daring and praiseworthy actions. To receive a cigar was almost equivalent to being given the M.C. on the field. I remember both Brailey and I were honoured in this fashion one afternoon. As we sat later smoking our trophies with great satisfaction in the old dresser's room, Mr. Jacobson passed on his way from the holpital. "Look," said Brailey, "there goes old Pom, chasing his own centre of gravity," which exactly described our chief's alert tip-toe, slightly "falling forward" progression.

I have known few people gifted with more ability and common sense, and at the same time with a greater quickness of wit, or a keener humour than Brailey. Once, as house surgeon to Mr. Dunn, in the operating theatre, both their heads were poised over a case, while I gave the anæsthetic. Out of the blue a hair floated down like an autumn leaf and fell into the wound. "Really, Arthur, my dear, you should be more careful," cried Mr. Dunn in that rather querulous voice that sometimes disguised his great kindness of purpose. Without a word Brailey picked the hair out on his forceps and, holding it to the light, examined it. As if to himself, he exclaimed "How singular, I am a blond, and this is a raven lock." Then turning, as though with a bright idea, to the surgeon, he added, "Shall I get you a cap, sir?" Mr. Dunn, not Brailey had omitted to cover his head.

After many alarms and excursions, much fun, sport and hard work, Bailey and I qualified about the same time, and were residents together. He was president of the table, and ruled with a firm hand and alert eye, so that the rest of us found it a hard matter to "get anything over" (as was then a barbaric custom which may even yet survive) without his detecting the culprit. Once, however, a pat of butter directed at our president sped past him, skied and got Sir Ashley Cooper in the face where it remained for many a day. "Will the gentleman who threw that kindly get a ladder and remove his meal from the Baronet's eye," said Brailey, encouragingly, but no one came forward.

About this time Brailey went up for his M.Ch. Cantab., then, as perhaps still, one of the most difficult and coveted of degrees. On his return he kept us all convulsed with laughter over the various gaffs he had made, what he had said to the examiners, and they to him, and so forth. Had he passed?

Not the ghost of a chance, he declared, with that pent-in laugh he had. A few weeks later, however, his name appeared as the only one at that sitting who had got through, and he was then, I think, the seventh or eighth in our profession who held that degree.

Brailey, the best of good fellows, was none the less always somewhat retiring and aloof, save to his intimates, hiding his light under a bushel. With one of the most brilliant brains of our time at Guy's, and at the University, he never came into the lime-light, he never appeared to be hard-

working, even, though he had an immense capacity in this direction. He was an ideal companion, reliable, unexacting, broadminded and generous, with a meticulous sense of humour and justice. Though he held strong views and expressed them with quiet force, I have never heard him say an unkind, bitter, or unjust word about anyone. He preferred to keep silence rather than to condemn. With that unassuming breadth of mind that was characteristic of him, nothing petty, mean or vindictive seemed ever to enter his thoughts.

Behind his professional attainments, he had too a fine æsthetic sense, though he did not care to cultivate or exhibit this to the full. Deeply read, his judgment on books and art was always acute. At one time I recall a group of us were very interested in poetry, and he would often surprise us by breaking in with long quotations from Keats, Francis Thompson or some classical author to cap or confute a point in discussion. These he delivered in a deep and sonorous tone that was beautiful, though he himself treated the whole thing as a joke.

A distinguished ophthalmic surgeon during his professional life, he manifested his dexterity later as carpenter, bricklayer, plumber and artistic decorator, all of which trades he employed with a really professional skill; there was nothing of the amateur about him. His beautiful Elizabethan home, The Clock House, at Dunmow, which he entirely restored, almost singlehanded, and in perfect taste, bears witness to this. Amongst much else to be seen there is a Georgian room entirely panelled by him, a large Tudor oak mullion bow window made by him, an "antique" mantlepiece picture painted by him, and some very convincing "mediæval" oak carving, all done with his own hands. Indeed there seemed nothing he could not do and do well.

Brailey very wisely retired in 1925, partly because his health had been impaired by continuous over-work during and after the war, but chiefly since he wished to enjoy living to the full that ideal family life with which he was blessed. With leisure at his disposal, then, these makings and breakings of houses had become one of his chief hobbies, second only perhaps in his affection to the sea and sea-faring.

I have hardly mentioned any of Brailey's attainments and academic distinctions, his high qualifications, his success as a Harley Street specialist, his prominent position in the R.N.V.R. and his devoted arduous work during the war, first at sea, and later as consulting Ophthalmic Surgeon to the Royal Air Force. He was the last person in the world who wished for recognition or reward, being sufficient to himself he courted no undue ambitions, though it did please him, I know, when he was made Honorary Surgeon to the King.

Yesterday we buried him at sea, six miles out from lovely Polruan and Fowey, in glorious weather and with the greatest simplicity, just as he himself would have wished. As the Padre and I sat beside his union-jack covered coffin in the trim white steam trawler that bore us on our sad journey, I recalled all this that I have written and much more besides.

I remember how we were once on a week's river trip with several others in those student days, and how Brailey had said during some rag, "Don't knock me overboard, for I can't swim." I asked him how this was, and he told me that as a schoolboy, he had been drowned in a bathing pool (they took over an hour to revive him). "The drowning was delightful," he added in his light-hearted way, "but being brought to was sheer hell. That's why I don't want to swim. If I'm to drown, let me drown." Well! so it was to be, and I know it is the death of all others he would have chosen, for he loved the sea as his father, and his father's fathers had loved it before him. Indeed he often thought of living on the coast and keeping on a yacht of his own, for the Brailey's are of old sea-faring stock and have given many of their bodies to the ocean.

R. G. G.–A.

A Case of Carcinoma of the Stomach associated with Toxic Nervous Symptoms

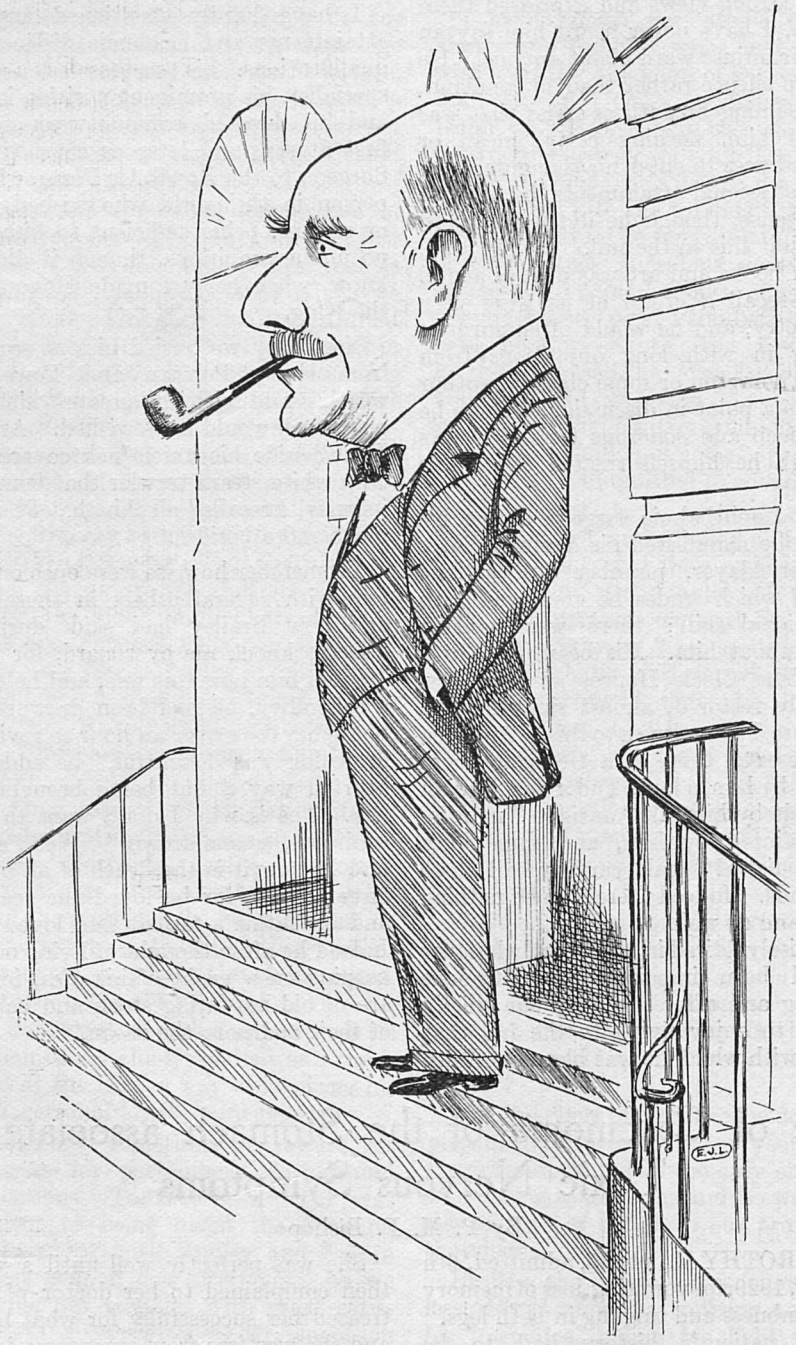
By P. M. F. Bishop

MRS. DOROTHY E., æt. 35, admitted, 6th August, 1929. for vomiting, loss of memory and numbness and tingling in both legs.

History.—The patient's history had to be obtained from the husband owing to her memory defect. Her family history is irrelevant and she had never suffered from any previous illnesses.

She was perfectly well until a year ago. She then complained to her doctor of diarrhœa; he treated her successfully for what he called colitis and she was free from symptoms for two months. She went to another doctor three months ago, and had been under him until she was admitted to Guy's. Ten weeks ago she began to vomit, and soon after

"SCIONS OF SURGERY"—I.



R. D.-C.

this she noticed that her memory was failing. She has at no time suffered any pain. Her doctor treated her with a number of medicines, but being dissatisfied with her condition, eventually sent her up to Guy's.

The vomiting occurs usually very soon after meals, but is not immediately related to the taking of food, for she has vomitted as often as 12 times a day. There is no nausea and the vomiting occurs without warning and seems to be like waterbrash. The vomitus is usually copious and tastes unpleasantly bitter; she frequently recognises in it food taken at the last meal, and also what she assumes to be bile. She is constantly troubled with eructations of foul gas.

The loss of memory started later. It is mainly for recent events and is a source of considerable trouble, for it inconveniences her in her daily duties, and her husband has to make out a list of things she has to do during the day, before he goes to his work in the morning. Any type of mental exercise causes what she describes as "a rumbling in the front of her head." This rumbling is with her pretty constantly, but is aggravated by thinking. In answer to questions she was able to state the year, the month and the day of the week, but not the date. At one examination she said the War started in 1916 and lasted five years. She was unable to repeat a number of more than four digits. On another occasion, on which she had forgotten the day of the week, she was told that it was Saturday, but had again forgotten within five minutes. She found it impossible to perform a simple subtraction test, without resorting to pencil and paper—subtract 7 from 100, then 7 from 93, then 7 from 86, and so on.

More recently she has noticed a sensation of pins and needles in her legs, and says they feel numb.

She has been decidedly constipated for the last few weeks.

She has been sleeping badly, but this is not because of any pain or discomfort.

Careful enquiry failed to produce any evidence of an alcoholic history.

On Examination.—The patient does not show any evidence of ever having been highly intelligent. She is of the worrying, nervous type and she reacts to external stimuli with an air of bewilderment.

She does not appear to have lost weight, and has a fairly good colour and is not obviously anæmic.

The Alimentary System—The patient had a number of teeth extracted on the advice of her doctor at the commencement of her illness. What teeth she has left are in good condition.

The tongue is not furred; it is rather smooth at the edges, but she does not complain of its being sore.

The fauces and tonsils are in good condition.

The abdomen is thin and rather scaphoid, but shows no signs of wasting.

A tumour is palpable to the left and above the umbilicus. (This observation was not confirmed on subsequent examinations, and it was, therefore, thought that it might have been the colon that was felt.) The kidneys, liver and spleen are not palpable. There is no tenderness either general or local.

The test meal showed a high normal acid, delayed emptying and a resting volume of 160 c.c. There was no blood in any of the specimens, nor was there any bile. Mucus was present in slight excess in most of the specimens.

An X-ray examination of the stomach on 13th August, 1929, was reported on by Dr. A. C. Hampson as follows: "Lesser curvature 2 inches above the crests; in the prone position peristalsis active; the meal moves freely—in the supine position none seen leaving; no localised tenderness; patient not seen in the upright position; after five hours almost the entire meal was still in the stomach."

The fæces were examined by Dr. J. H. Ryffel, who reported: "Negative guiac; positive hæmatoporphyrin; some old blood present."

The Nervous System. Apart from her lapses of memory the patient is moderately intelligent, though cerebration is rather slow and the patient is rather apathetic. She displays a pathological degree of naïvété.

The discs are normal.

The pupils display a rather flickering reaction to light, especially the left pupil. They react to accommodation. There is a coarse nystagmus in the horizontal plane, but not in the vertical. This appeared to be of the nature of a fixation nystagmus. There has been no complaint of dimness of vision and the fields are normal.

There is a fine tremor of the tongue on protrusion, but no deviation to either side.

The deep reflexes are present and equal on both sides in the upper extremities; all four abdominal reflexes are absent; both knee and ankle jerks are absent, and the plantar reflexes are flexor.

There is some tenderness of both calf and plantar muscles.

There is some anæsthesia of the lower limbs below the knees to cotton wool, pin prick and hot and cold tubes, but it is too indefinite to be mapped out clearly.

The heel-shin test was performed satisfactorily, as was the finger-nose test. Sense of position of the great toes was good. Rhomberg's Test was performed rather unsteadily. The patient has no characteristic gait.

The cerebro-spinal fluid was not under pressure ; there were no cells present ; the protein was .03 per cent. ; the Wassermann was negative and the colloidal mastic was normal.

The Cardio-Vascular System. The pulse was of good tone and volume, and the rate was 100. The heart was normal in position and size and there were no murmurs. On several occasions extra-systoles were present.

The blood pressure was 120 : 85.

The blood picture was as follows :—

Hæmoglobin 70 per cent.
Red cells 3,680,000.
Colour index 0.95.
White cells 4,500.
Polymorphonuclears 72 per cent.
Lymphocytes 19 per cent.
Hyalines 6 per cent.
Eosinophils 2 per cent.
Basophils 1 per cent.

The blood Wassermann was negative.

The Van den Bergh reaction was negative.

The Respiratory System was normal.

The Urinary System.—The urine showed no abnormality. The Blood Urea was 32 mgrm. per 100 c.c. McLean's Urea Concentration Test showed no definite lack of concentration on the part of the kidneys.

The temperature on admission was normal.

On Admission.—When only the routine clinical investigations had been performed, the following differential diagnosis was discussed :

(1) Meningo-Vascular Syphilis. This was subsequently excluded by the negative Wassermann reaction.

(2) Incipient Uræmia. This was excluded by the urinary investigations and the tests of renal function

(3) Subacute Combined Degeneration of the Cord with Addison's Anæmia. This might account for the numbness and tingling in the legs and the smooth tongue, although the mental condition was atypical. The diagnosis was excluded by the test meal and the blood picture.

(4) Disseminated Sclerosis. This diagnosis was put forward only to account for the apparent dissemination of the nervous signs.

(5) Frontal Tumour. This might explain the vomiting and the memory changes.

(6) Toxic Peripheral Neuritis. The difficulty here was to explain the nature of the toxin. Alcohol would fit in well with the signs, and the case presented many features of Korsakow's Syndrome, but no history of alcohol could be obtained. Furthermore, the patient became progressively worse while in hospital ; since the ward was put in quarantine 10 days after the patient was admitted, on account of a case of smallpox, it was quite certain that she could obtain no supplies of alcohol from her visitors. The same argument applied to any exogenous toxin, poison or drug, which might have been administered to her before she came into hospital.

(7) The idea of the mental changes being functional left unexplained the various organic physical signs, such as the absent knee and ankle jerks.

PROGRESS.

The patient's mental condition became progressively worse, and she began to complain constantly of "rumbling in the head." At first this was confined to the frontal region, but later she localised it in the occipital region. This sensation began to prey on her mind, and on several occasions she admitted to a fear of becoming insane. Her sleep became seriously disturbed. She was put on a Pot. Brom. mixture. Paraldehyde dr. v per rectum in Gum Acacia were given without effect. Heroin, Hyoscine, Allonal and Soneryl 2 c.c. intramuscularly were all tried. During the daytime her attacks of confusion became more frequent and prolonged, and her memory defect more marked.

She began to complain that her eyes were troubling her very much, and the trouble seemed to be due mainly to inability of fixation. She developed a marked degree of ptosis of the upper eyelids, and was eventually found to have a complete paralysis of upward movement of both eyes, which Dr. C. P. Symonds localised as a bilateral third nerve nuclear lesion.

During this time vomiting became a prominent symptom. In view of the copious vomiting, the large volume of the resting juice in the test meal, and the X-ray evidence that almost the entire meal was still in the stomach at the end of five hours, it was decided to X-ray her stomach again with a view to discovering, if possible, the cause of her pyloric obstruction. On the screen there appeared to be a tender, irregular filling defect of the pyloric portion, through which, however, the meal could be fairly easily massaged into the duodenum. The appearances, both on the screen and on the film, were too indefinite to come to a conclusion as to the nature of the pyloric obstruction. Nevertheless, since the pyloric obstruction was the only factor which could be held responsible for any of the patient's symptoms, it was considered right to perform a laparatomy with a view to proceeding to a gastro-enterostomy if necessary. With this in view the patient's stomach was washed out daily until the day fixed for the operation. On each occasion a large volume of resting juice was evacuated, and a great number of washings were necessary before clear fluid was returned. In spite of this the stomach wall was found to be

thickly coated with barium at operation four days after the X-ray.

On the morning of the day of the operation the patient had a fit. It lasted three minutes. There were no localising signs, but the limbs were spastic. A few minutes after the fit had ceased the limbs were quite flaccid and the plantar responses were extensor. In spite of the fit it was considered advisable to proceed with the operation as arranged.

The operation took place on 6 Sept., 1929. Under the anæsthetic a lump was palpable in the epigastrium slightly to the right of the mid-line. Mr. R. Davies-Colley opened the abdomen through a paramedian incision. An organic stricture was discovered at the pylorus which was the site of a hard smooth mass; no infiltrated glands were palpable. In view of the possibility of the stricture being malignant a partial gastrectomy was performed with an end-to-end anastomosis of stomach and duodenum. There was no excessive bleeding, and the patient stood the operation pretty well. A drainage tube was inserted. On examining the portion of the stomach which had been removed the stricture appeared to be due to a healed benign ulcer. The part was sent for section and Mr. H. E. Harding reported on it as being a colloid carcinoma.

The patient did not rally after the operation and died the next evening.

At Autopsy the heart was small and the muscle flabby; the anastomosis of stomach and duodenum was found to be efficient; there was a considerable quantity of barium in the stomach and much mucus; there were a few small glands along the lesser curvature, white, hard and malignant; the liver was small and mottled; the spleen large and rather soft; the meninges were hæmorrhagic over a localised area of cortex; the brain on section showed nothing of importance.

COMMENT.

Reviewing the case as a whole, it was felt that the pyloric carcinoma must be regarded as having been responsible for the nervous symptoms and signs, and it is suggested that the type of carcinoma which is found at the pyloric end of the stomach may elaborate a toxin which makes a specific attack on certain cells of the brain and cord. This is borne out by other cases of a similar nature which have occurred in the Hospital recently.

I am indebted to Drs. J. M. H. Campbell and A. H. Douthwaite, under whose care the patient was, for permission to report the case.

Reviews

"*Marriage*: *Past, Present and Future.*" By Ralph De Pomerai. Published by Messrs. Constable. *Price* 15*s*.

IT is in love and procreation that the deepest sense of fulfilment should be found by most men. The great achievements of the mind can never replace those of love undertaken with our whole nature. The spirit and body strive together to make life beautiful for at least one other being. And in communal life, love, if it be consumated, must be tempered by some form of marriage chiefly that our helpless offspring may have protection. Any conception that religious or legal vows can protract and protect our love is but an admission of faithless cowardice.

A certain provocative book. "Women—A Vindication," by Mr. Ludovici, first stimulated Mr. de Pomerai to put his views into print and to make an attack not only upon Mr. Ludovici, but upon many of our laws and conventions—not wantonly destructive, but selective and eventually constructive.

There is ample excuse for Mr. Ralph de Pomerai to attack this problem of marriage afresh. He has spent much of his life amongst peoples in various stages of social evolution, and has made extensive reading of classic and modern authors on marriage: but what is more important, he has sufficient faith in life to believe that salvation lives with beauty.

After a fascinating abstract of the history and evolution of marriage, there follows by far the richest chapter, "The Complexity of Modern Marriage," in which an attempt is made to understand and illuminate the demands that our complex natures make upon marriage. It is a remarkable study in objective psychology and vision.

In another place he says, "The man who truly loves a woman will unhesitatingly surrender her to another if his sacrifice will be conducive to her greater happiness, and a woman who truly loves her husband will make a like sacrifice, but although this sentiment is somewhat rare at present, it is unquestionably spreading and gaining strength."

The hide-bound conventionalist need not be startled by this glimpse of beauty. Mr. de Pomerai chooses monogamy as the most natural and satisfying form of marriage.

The later chapters propound and discuss schemes for the future, not abstract ideals but detailed changes in the law and our ideas. There

is a complete proposal for amended divorce laws with details of monetary penalties and forfeits. This is rational and attainable.

It will be some time before Mr. de Pomerai is fully appreciated.

L. W. C.

The Cancer Process. By J. J. M. SHAW, M.A., M.D., F.R.C.S.E. Published by Messrs. E. & S. Livingstone. 16pp. 8vo. *Price* 1*s.*

DR. SHAW begins by objecting to the use of the phrase "Chronic irritation" in relation to the problems of the genesis of cancer. His own amended statement is that :— "cancer is caused by prolonged contact between the cells of living tissue and any substance which possesses these three properties : Viscosity, insolubility in tissue fluids, and toxicity to cell life." A substance possessing these three properties is called a potent substance. On an epithelial surface a potent substance may lead to hyperplasia, by which the ingress of the potent substance is prevented. The upper cells are then desquamated, and the potent substance thereby removed. In the absence of hyperplasia, the potent substance enters the lymph channels and eventually reaches the liver. If the quantity and degree of toxicity is sufficient, death ensues, usually with marked cachexia. Thirdly, a sub-effective hyperplasia may be exhibited in which the slow proliferative effect is inadequate,—result, papillomatosis.

We would suggest that the examination of bodies, post-mortem, and of well-cut and stained microscopic sections would reveal a certain inadequancy in the above simplified theory of cancer.

Minor Surgery and Bandaging. By GWYNNE WILLIAMS. Published by Messrs. J. & A. Churchill. *Price* 10*s.* 6*d. net.*

THE fact that this book has reached the twentieth edition is in itself a recommendation, and we consider that it well deserves its present popularity. It is an ideal book for the young and diffident house surgeon, who cannot remember off-hand all the hundred and one little points, which are bound to come continually before him. The contents of the book include an admirable chapter on anæsthetics and another on fractures. The injection treatment of varicose veins is also fully described. The illustrations are mostly excellent, but there are one or two scrappy woodcuts illustrating the art of bandaging, which one finds in most books of this type. The binding and the quality of the paper are also excellent and make it altogether a very presentable book.

Correspondence

Dr. French's "Sea Sayings"

To the Editor of the GAZETTE

SIR,—I see in the current number a list of sea terms in common use in the language, and note that Dr. French invites additions to this already formidable array. May I suggest the following ?

"Between the devil and the deep sea," the devil in this case not referring to His Satanic Majesty, but to the technical term for the top seam in a ship's side.

Similarly, "The devil to pay" (*i.e.*, caulk).

Another common one is "chock a block," this being the expression used to denote that the two blocks of a purchase have come together.

Yours, etc.,

G. NESBITT WOOD.

45, Wellington Square,
Hastings.

Hospital Information, etc.

Change of Address

J. M. H. Campbell, M.D., 47, Arkwright Road, Hampstead, N.W.3, *Hampstead* 6385, and (unchanged) 25, Upper Wimpole Street, W.1, *Welbeck* 1627.

Appointments

ARMY DENTAL CORPS.

Capt. J. L. Garrard to be Major.

W. E. Berwick, L.D.S., R.C.S. (Eng.), to be Hon. Dental Surgeon to the Royal Hospital, Richmond, Surrey.

Papers by Guy's Men

J. H. Badcock. Treatment of children's teeth and the use of baseplate guttapercha, *Brit. Dent. J.*, li, 1025.

J. J. Conybeare. A case of old-standing tuberculous kidney, *B.M.J.*, 1930, ii, 314.

S. C. Lewser.. Cerebral hæmorrhage in a young woman, *B.M.J.*, 1930, ii, 313.

E. G. Slesinger. Cancer of the Œsophagus, *Clin. Jour.* lix, 433

EDS. { P. M. F. B. / P. V. R.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *4th October* 1930 *Number* 1101

PASSIM

THERE are many interesting words in the English language, some are frankly absurd, such as "squame" and "gibbous," some are quaint and incomprehensible like "scissel," some are completely useless, like "jejune" and "eleemosynary," and we know a few more quite unsuitable for the lily pages of Passim; but there are to be found no sadder words than the simple and very trite statement "the nights are drawing in," and none more comforting than its corollary, "muffins for tea." We have just made, as editors ever have, before and after Dr. Johnson, a hearty dinner, donned our roomy editorial slippers, and lit the first fire of the year, a timid thing, very retiring and easily discouraged; and we are feeling very autumnal and very sentimental. The advent of Autumn brings with it many things, brisk, golden mornings amongst the exfoliative woods, blue, misty evenings in the College with every gramophone singing with an open throat and every fire smoking hard, the screaming and wheeling of south-bound swallows around Hunt's Tower (they look more like sparrows, but for literary purposes they must masquerade as swallows). Not only by these tokens do we know Autumn, but also by that sure harbinger of winter, no hot water in the mornings, and that is a curse, and by the beginning of the medical year, and that is a greater.

It is an unhappy disposition on the part of the gods, or of the Conjoint Board, that the most lingering and noisome examinations are held in the midst of June, and that such an auspicious occasion as this, the beginning of the Medical Year, meet surely to be celebrated by high holiday and dancing on the green, or at least a day's golf, should occur in the saddest month of the year. In the country lanes October is mournful; in the courts of the Borough she is as entertaining as some Sunday play by an obscure Slav. If there is about the Maze Pond one dominant note, surely it is the smell of hops; and never do they smell more hop-like, more mournful or more sentimental than in October. Their peculiar and indescribable odour carries the mind back to those first few months at the Hospital, surely the happiest of all, to the first, fresh wonder of the frog's inside, to the first final at Richmond, and to the day when first we crept with delightful trepidation, not at all certain that we should not be sick and disgrace ourselves for life, into the gallery of Theatre IV, and smelled the strange, fierce ether.

Eheu, fugaces! Strange that six years should give one the heart of a veteran; but gazing round the Dining Room, and seeing all the new, unknown faces, we feel something of that wobbly sensation inside, which must have afflicted Rip Van Winkle, when he woke from his sleep and strolled down the street looking for his old friends. And feeling old and magisterial, we would like to give the new man a few hints about the value of hard work. If there is one thing above all others that we, in our senile self-abasement, deplore, it is the lost opportunity; and we would remind him that never has hard work actually caused any injury (Borradaile is almost as entertaining as billiards and, after the initial outlay, much cheaper); that by sitting up six hours every night reading inorganic chemistry, he may hope eventually to sit up the whole night waiting for a baby that is born the following evening, and that systematic note-taking will prove as useful to him as the operating cystoscope is to the oto-rhino-laryngological surgeon Finally, we would remind him that the essential foundation for a successful life as a consultant or as a general practitioner is hard work all the time. One may not make any money, but, after all, thinking it over carefully, nor would one in the workhouse.

THE following have been appointed Clinical Assistants for the period beginning 16th October, 1930 :—

J. Chamberlain.
H. O. Lyne.
R. B. Peckham.
A. C. Price.
G. V. Steward.
R. B. Sutcliffe.

WE are pleased to learn of the arrival, from the National Radium Commission, of Standard Report Forms to be used throughout the country. The Report Forms have been very carefully drawn up by experts from all over the world and the diagrams are reproduced by permission of Professor Regaud, of Paris. We hope in our next number to outline more fully the procedure with regard to keeping records of radium cases since the arrival of these Radium National Forms.

WE wish to tender our apologies to Dr. A. H. Douthwaite for being responsible for a misprint of some importance in his Lecture on Glandular Fever in our last number. The paragraph in question read :

" The cells are chiefly of the large type, the majority being atypical lymphocytes, larger than the normal cell, possessing relatively more protoplasm which may be vacuolated, and a nucleus which is often indented or bilobed. These cells are regarded as precursors of *lymphoblasts.*"

The word in italics should read *lymphocytes* instead of *lymphoblasts.*

The Privileged Profession

By Ian Hay

THE PRIVILEGED PROFESSION.

IT is always interesting to consider other people's trades and professions, and speculate as to how we should have acquitted ourselves therein. Being only human, we usually come to the conclusion that we could have done the job much better ourselves if we had cared to undertake it.

For instance, anybody can handle an army or a navy : we have only to remember our amateur strategists during the war to realize that. And anybody can preach a sermon—at least, a better sermon than the Vicar handed out last Sunday. The fact that the Vicar has to produce, roughly, a hundred sermons a year, all superficially different, and that in any case they must be composed in the intervals of christening, marrying, and burying the parish, comforting the sick, and supervising half a score of local philanthropies, does not, of course, occur to us.

It is the same with teaching, writing, or running a business. Anybody could do it, given the opportunity and inclination.

But somehow, when it comes to contemplating the Medical Profession, even in the person of our family doctor, we are not quite so sure of ourselves.

The fact is, the man has two sides. With the one side—the human and non-professional side—we are familiar enough. We are well used to his company as a partner at golf, or a fourth at bridge, and to that extent we submit him to the ordinary tests and treatment of human society. If we like him, as we usually do, we shout a cheery " Good morning, old man ! " to him as his car passes us on the road. He is just a neighbour, with a handicap of twelve (which ought to be fifteen) and a quite incurable passion for going no trumps upon inadequate hands.

Of course, we may be so rich that we are not in the habit of shouting "Good morning, old man ! " to anybody under the rank of a stockbroker, or so healthy that the existence of the healing art is entirely unrealized by us. But time will cure this. In the end, sooner or later, we all come to recognize the doctor's existence—and to discover his other side.

Now we behold a man transfigured. Indeed, he is not a man at all : he is a divinity. We implore his presence. We hail his coming with gratitude and relief, as a frightened child hails the entry of some one into a dark room with a lighted lamp. He takes immediate and entire charge of the situation. He orders us about, and we obey his decrees without question and with trembling eagerness. His presence calms our fears, soothes our pain, and restores our hope.

In due course, when he has healed our sickness, or saved our child, and everybody is growing convalescent and fractious, he reverts to his former status. Once more we regard him as an agreeable table companion, or reliable partner in a foursome, or a good *raconteur* ; or for that matter as a bore or a gossip. In other words, he is just a neighbour again.

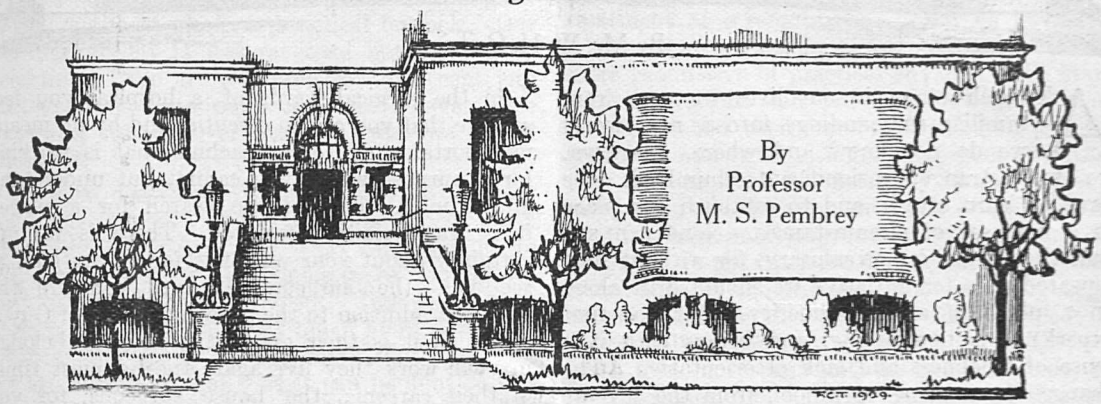
But down at the bottom of our hearts remains, and always will remain, the memory of that hour when the black chasm opened at our feet

and we held on to his calm and steady hand and begged him to pull us (or somebody else) back to safety—and he did not fail us.

The doctor is one of our few indispensables in life. He launches us into the world. Upon our voyage therethrough he is periodically summoned on board to assist us in that most delicate operation known as "executing repairs while under steam." And when the end comes at last, and the failing machinery refuses any longer to obey the calls from the bridge, it is he who takes the wheel and pilots us with tenderness and skill to our last anchorage. That seems to me a rather fine privilege, and accounts for the title of this little article.

And there is another privilege, denied to most of us. In most trades and professions you have to establish your *bona fides* in some definite way. If you apply for a job, you must produce written references and testimonials. In business transactions people expect estimates and contracts. But when you embark upon the trade of a Doctor in this country, all you have to do is to put up a brass plate with your name and degree, and people will accept you as a matter of course. They will receive you into their houses; they will leave you alone with their wives and daughters, and entrust you with all that is domestically sacred to them, without question. What exactly does this signify? It signifies in the first place that an English medical degree is good enough for anybody, and in the second that an English Doctor can be trusted anywhere. For generations that tradition has been passed down, and it is the privilege of those for whom this *Gazette* exists to uphold it.

To Those Undertaking the Pre-Clinical Sciences



THERE is no necessity in a School of the University of London to explain or plead the value of a study of the so-called Pre-Clinical Sciences, Chemistry, Physics, Biology, Anatomy, Physiology and Pharmacology. The advance of Medicine, Surgery and Midwifery depends upon the application of knowledge of these sciences, especially the biology group. Of this there is no doubt. In spite of the reactionary views of some medical educationalists, Biology has been re-instated as an important subject in the medical curriculum required by the examining boards of the medical corporations.

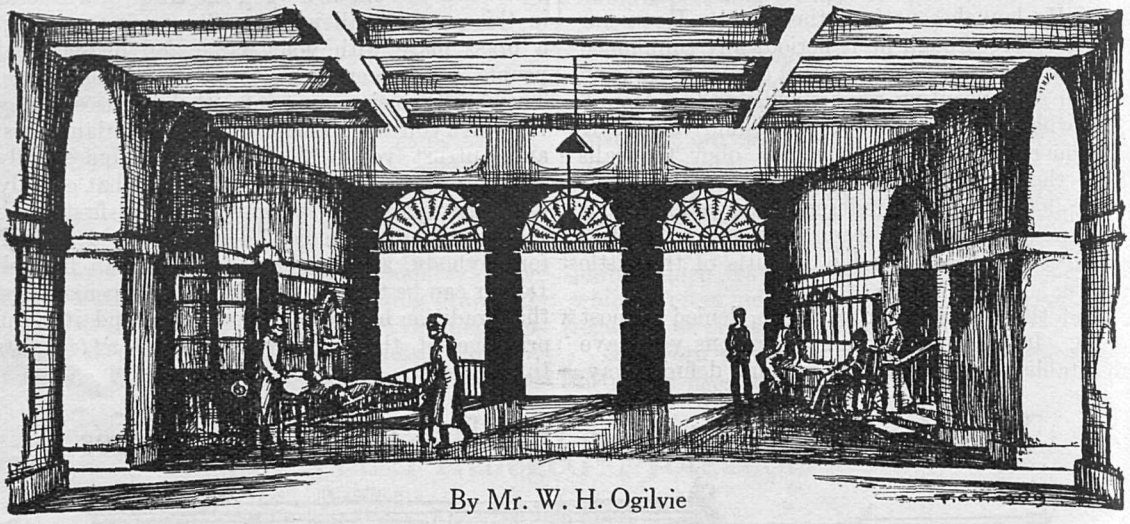
The trend is towards an extension of the study of these sciences in relation to their application to the solution of clinical problems. This is shown by the causes given in so-called applied Anatomy and Physiology. There is little doubt that in the future there will be more co-ordination and co-operation between the other sciences, for Chemistry and Physics have the widest application in modern methods of diagnosis and treatment of disease.

It is impossible to give advice upon methods of study which will suit all students. No two men, unless they be identical twins, are equal. "What is one man's drink is another man's poison." Nevertheless, it is a sound general rule to endeavour to develop the visual memory, to form mental pictures of anatomical relationships and physiological processes. Further, it is no waste of time to argue with fellow students upon any subject and to attend the meetings and join in the debates of the Students' Physiological Society. Now is the time to learn by making mistakes, to recognize that truth is the balance of evidence and good and bad are relative.

The true aim of education is not to pass examinations quickly in order to save or make money. Gold is not biological standard of value.

Finally, the advice given by Osler to medical students may be recalled, "Avoid overwork and excessive smoking. Overwork in mental pursuits is a vice; a nervous break-down is no evidence of virtue and self-sacrifice. Life should be lived as a whole."

To Those Entering the Surgical Wards



By Mr. W. H. Ogilvie

AT each stage in our lives we pass from familiar surroundings into a new world we do not know and where, unknown, we feel strange, insignificant, humbled. We have to learn afresh, and to establish our place in a new set of circumstances. None can say that the change is not salutary, for without such repeated calls for initiative we should drift along on a plane of easy mediocrity. But the first experience is bewildering, and brings with it a sense of loneliness and lack of orientation. The changes from home to school, from the private school, where we had become cock of the walk, to a larger one in which once again we were friendless and insignificant, are epochs stamped indelibly in the minds of most of us.

Very much the same feeling of strangeness may come upon you when you step into the surgical wards to take up the first duties of the clinical part of your career. It is very like going to school again as a new boy. But in the superficial way only does the resemblance hold good; in every other way the experience that awaits you in the wards will be a less formidable one. At the bottom of that sinking of the heart which assails the new boy when he arrives with his trunks at the school door is the conviction that nobody wants him, that he has no place in this great company, nothing to do, but everything to learn. Only when he has familiarised himself with the rules, and shown what he can do, will he have again the feeling that he is filling a place in a community of which he has become a valued part.

In the surgical wards of a hospital you feel at once that you are an essential and by no means unimportant part of a machine that is working for a purpose which you cannot but understand and admire. There is no search for a place: it is there waiting for you. There is no uncertainty about your welcome, for all are glad to see you—the surgeons, because you are the youngest addition to the growing family of Guy's, to which it is their greatest honour to belong; in your work they live again the happiest times of their careers; the house surgeons, for you are part of the team they lead; your help will make their work run smoothly, your enthusiasm encourage them to put their experience at your disposal; the patients, perhaps, most of all, as the man who gives them personal interest, who knows their case, studies their constitution, as the busy senior cannot find time to do. Years afterwards these patients, asked who looked after them when they had their operation, will give your name rather than the surgeon's, who seemed to them at the time by far the least important of the two.

The work you have to do is waiting for you, and it is sound practical work. At school, you had to learn by sheer force of memory, dates, facts, formulæ, things whose purpose seemed obscure, and whose ultimate value was doubtful. In the junior part of your medical studies the purpose of what you learned was perhaps obvious, but the facts of Biology, Chemistry, Physiology and Anatomy called for the same drudgery in their assimilation. I will not claim that surgery

does not demand memory and book work. When examinations loom ahead in a year or two, you will have to classify your ideas in a form acceptable to your examiners. But to anyone with a sound knowledge of anatomy, physiology, and pathology, surgery will contain no mysteries. It is no more than the application of common sense to problems of anatomy, physiology, pathology and, at any rate during the first six months, hard work and common sense will serve you far better than any reading.

Surgery is changing under our eyes, and changing greatly for the better. We have reached the end of the great epoch of exploration that followed Lister's discoveries, and entered a period of critical revision and examination. Surgery as I learned it still had something about it of a religion. The accounts of disease came from the lips of the major prophets who had expounded Lister's gospels, and they were accepted with an unquestioning faith. Operations were designed from an almost wholly anatomical outlook. Our attitude to-day is less reverend but more truly scientific. We are not prepared to accept any statement on authority, but must have some evidence, statistical or reasoned, why we should accept it.

Surgical treatment is based more and more upon physiology. We already know how much the body will stand, and what can be done to any organ; very little remains to be done in the way of technical improvement. But we are now seeking advance from that much more important science, the study of function. The questions we are asking are not "what can be done to this organ, what can be cut out?" but, "how has the disease which we are called upon to treat interfered with the normal function of this organ, how can we restore the normal, or if that is impossible, how can we imitate the normal function as closely as possible?" Go then among your new patients and think, with the preparatory knowledge that you have acquired to guide you. Take nothing for granted, from your teachers or your text books. We are all trying hard to set our house in order; your fresh outlook may help us to new conceptions. Eighty per cent. of amputations, sixty per cent. of abdominal incisions, most of the operations upon the foot and the stomach, and all of those for hare lip, have been scrapped within the last fifteen years. The whole of our ideas about infection, and the basis of our treatment of hernia have been drastically revised. Peritonitis and intestinal obstruction are now viewed from the physiological aspect, and not that of the mechanic and the druggist. Learn surgery as you would sail a boat, studying the forces which are against you, and seeking to use them to advantage.

So much for your attitude to the work. Its practice is, however, of equal importance to you and of greater value to the hospital. A bad ward clerk can never become a good dresser or an efficient house surgeon. Your most important duty will be the examination of your patients, and keeping a record of their treatment and progress till their discharge. It is impossible to overstate the value of this work. Its conscientious performance will train you in habits of observation and clear statement that will be of service to you throughout your career. Accurate records may be of vital importance to the patient, should he again be admitted to hospital for some trouble related to that for which he was being treated while you were his clerk. They are indispensable for the advancement of surgery. The critical analysis of series of cases of any type, and of the results of any form of treatment at a remote period, may be less spectacular than laboratory experiment, but it is far more productive of practical advance. We know what operations can be done; we know their mortality, and their immediate effects upon the patient: but the ultimate improvement that they may produce, the durability of this improvement, and the effects, beneficial or adverse, of modifications in detail, can only be learned by following up the cases for many years afterwards. Knowledge of the greatest value is slowly being accumulated in this way by the statistics of individual surgeons, by the study of the collected cases from hospitals, and, on a larger scale, by investigations into certain problems carried out by the Ministry of Health. But the value of these investigations and of the conclusions drawn from them depends almost entirely upon the detail and the accuracy of the report on the patient that was made at the time of his stay in hospital.

Other things you must learn, to fit you for more responsible work—the names of instruments, suture materials, antiseptics and dressings, and their various uses; the details of aseptic technique; the methods of bandaging; the dressing and after-care of operation cases, and the treatment of the many minor setbacks which may disturb the comfort of the patient and affect his progress. Ask the sister to show you how to make beds, to move helpless patients, to change sheets without causing pain: such knowledge may be of critical value at some point in your career.

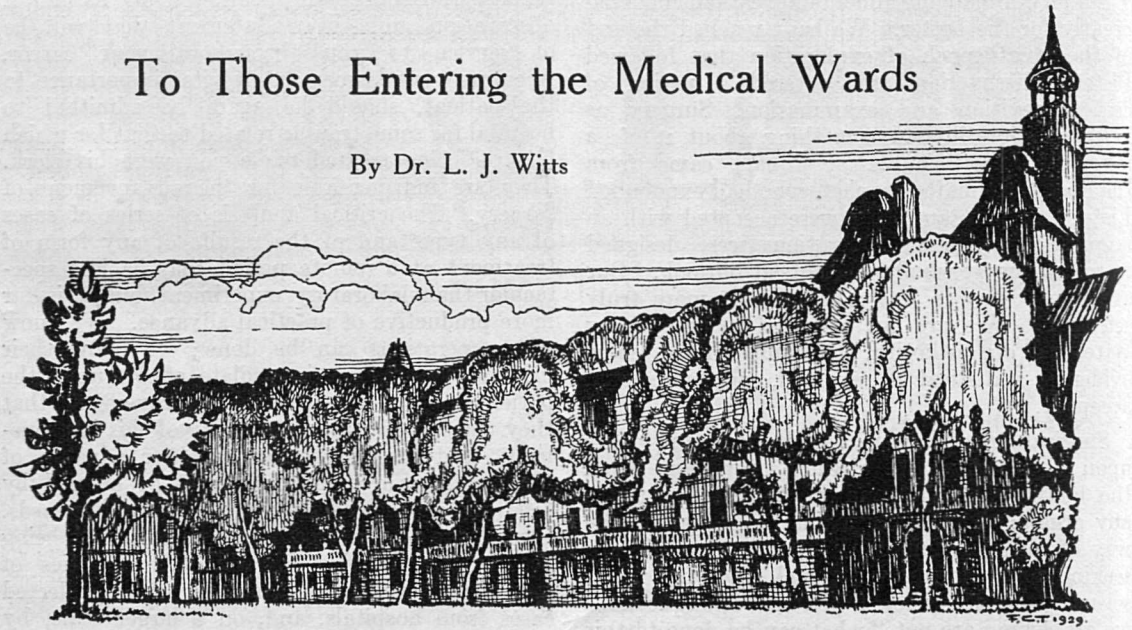
Above all, study the human side of your patients. In after life, your degrees will testify to your brains, but your practice will depend chiefly on your personality. With a knowledge of the

hospitals of many districts and many countries I believe that Guy's should above all things be grateful for its patients. No finer set of men and women can be found anywhere than those who live round us in the Borough, and who come to us in their troubles. In the wards they are your patients and your friends. You will be treated with a faith and affection that should make you feel humble and eager to deserve it; you will be told the innermost secrets of their hearts with a sincere trust that the spiritual or legal adviser fails to inspire. Make the most of this privilege, for in the study of men you will prepare yourself to deserve the highest title ever earned by mortal, "the beloved physician."

Begin now; later you will be too busy and preoccupied. Here in the surgical wards which you enter for the first time, you can acquire a knowledge, and the sympathy founded upon it, which will better fit you to serve humanity, both as men and doctors, than all the science in all the text books.

To Those Entering the Medical Wards

By Dr. L. J. Witts



"*Alice soon came to the conclusion that it was a very difficult game indeed.*"—Alice in Wonderland.

THERE is no hospital more friendly than Guy's Hospital and none with pleasanter wards. The long windows through which the trees and sunshine of the park are visible, the bed-tables littered with flowers and fruit and children's toys, the nurses and chaplains and visitors, all combine in a setting which is very different from that of a medical school or laboratory. Indeed, if a medical school represents the science of medicine, surely the wards enshrine its art. The beds are inhabited by patients, that is to say, suffering human beings. Only in a nightmare would it seem possible to see them occupied by partially dissected limbs or nerve-muscle preparations or isolated livers or stomachs. Yet should you ask a nurse or even a houseman to tell you about these patients, you will almost certainly hear that No. 1 is renal, No. 2 a stomach, No. 3 a cerebral tumour, No. 4 typhoid fever and so on. With a stretch of the imagination it is perhaps possible to imagine someone as a stomach—"whose God is their belly" as St. Paul said. But it is sheer nonsense to say that a patient *is* this or that disease, though this is a mistake that all of us are constantly making.

In the wards you are dealing with human beings. You will often be tempted to forget this and to imagine that you are dealing with diseases, and you will be encouraged in this error by text-books which describe conditions such as mitral disease and typhoid fever as if they were absolute entities. They are not. There are typhoid bacilli, and there are human beings, and when the two come into conflict we may get the struggle which we call typhoid fever. Our description of typhoid fever is a composite picture of this struggle as it occurs in a variety of human beings, affected by different doses of organisms of varying virulence, and actual cases of typhoid fever differ as much as or more than mankind. Moreover, when you

come to study the epidemiology of the fevers, you will be persuaded that men are often infected by bacteria without showing clinical signs of disease, though reactions which have modified the composition of the body have occurred. No text-book can usefully describe all these shades of reaction. It is enough to know the broad principles of infection and to apply this knowledge to the individual patient, rather than to regard his signs and symptoms as parts of a jig-saw puzzle which, if you are only clever enough, can be fitted together to give the answer Typhoid Fever. Again and again we see patients with advanced disease of the heart who are doing arduous work, while other patients with some trifling cardiac irregularity are living lives of invalidism. Important as the heart is for the maintenance of life, it is clear that it is not the only factor in the development of symptoms in these patients. Learn from the beginning to treat the patient and not the disease.

This truth that the whole is greater than its parts should not be new to you. Starling has emphasised the inseparable association of all the elements of the circulatory system; Haldane, the fundamental unity of respiration; Sherrington, the integrative action of the nervous system. In pathology also we have learnt to think of the whole organism. "An animal grows blood or liver or claws because in the prevailing circumstances it needs them, and destroys tissues because in the prevailing circumstances it has no use for them; its actions, in short, are determined by its environment and directed by its intentions. What is the purpose? Why, surely, to be in the best harmony with its environment (apart from which it is meaningless) and so adorn the world" (Boycott). There would seem no need to stress this truth in clinical medicine, where we are always dealing with the intact patient. Unfortunately there is every need. Your years in the wards are not only an education in medicine, but also a preparation for a professional examination. On qualification you become in many respects a state servant. The state rightly regards it as important that cases of typhoid fever should be isolated as soon as possible, and it therefore demands from the practitioner the ability to recognise such diseases. Much of your course is spent in learning to put labels on patients, rather than in becoming a doctor in the true sense. It is rather easy to learn to put labels on hospital patients—the destination of many of them requires little insight. Outpatients and private patients are much harder to label, but there are one or two useful labels like neurosis and blood-pressure and endocrine deficiency which will cover a multitude of symptoms. All this may be of use in getting through examinations, but it has very little to do with treating patients. Much of your time after qualification will be spent in unlearning this habit of pigeon-holing patients in disease categories and in learning to regard them again in a fresh light as people who are reacting to some hostile factor in their mental or physical environment.

A patient cannot be properly treated until a diagnosis has been made. Diagnosis means literally a thorough understanding of all the factors which have contributed to the patient's illhealth. It is much more than the simple affixture of a label. How often, for example, one sees a mountainous fat woman who has been found to have auricular fibrillation and is being treated with digitalis to the total neglect of the obesity. Or it may be a child with asthma. It is not enough to make a diagnosis of asthma and then look up the appropriate remedy in a text book of therapeutics. A careful history may reveal that other members of the family have suffered from the same malady. Perhaps it is one of a family of four living in a single room in a poor quarter; the other child is a baby and the atmosphere of squalor and neglect in which our little patient is living has been very important in rendering the asthmatic tendency manifest. It is not enough to dose him with glucose or hydrochloric acid or whatever remedy is fashionable. It is much better to try and get him into an open-air school or the country, where his general condition can improve and the morbid tendency become latent.

It is a dreadful thing that the medical course is such a cram. I know it is inevitable, but it is one of the worst of mental trainings. Under the strain of acquiring a large amount of knowledge in too short a time our minds lose their resilience, and as a profession we are conservative and sclerotic. It is for this reason that the medical body requires the constant prodding of people like Mrs. Eddy, Bernard Shaw, Freud, Sir Ernest Barker and Mr. Bernard Macfadden, if it is to keep up with the march of progress. When I have worked in laboratories alongside chemists and physiologists, I have often been humiliated when I have realised by comparison how deficient I was in curiosity and an enquiring mind, and I have felt how much of educational value is suppressed in a medical curriculum. I hope you will not let your spirit of curiosity be stifled. It is perhaps easier to keep it alive at Guy's than at any other medical school. The tradition of the hospital allows the students a large initiative and discourages artificial barriers

between the teacher and the taught. The Clinical Ward, the Physical Society, and the intimate connection between the hospital and the laboratories, all offer unrivalled opportunities for individual work and thought before qualification, and I hope one or other of them will tempt you from too great an absorption in the main task.

Hitherto studies have been neatly parcelled out to you. You have learnt to know the body as a leg this term, an arm next, a thing built up out of muscles and viscera which can be separately studied. There has been little time to synthesise these elements of knowledge into a conception of the complete organism. It will often seem as if your previous learning has nothing to do with your present task. Much must be taken uncritically and on trust. Gradually you begin to harmonise physiology and pathology and to appreciate the fascination of medicine. Every patient is a new problem, which adds to your experience, and the greater your knowledge of the basic sciences, the better will you understand the signs and symptoms of disease and remember them, not in isolation, but in natural sequence.

To Those Entering the Nursing Profession

LAST month a full set of nurses entered the wards, having completed the 15 weeks' course in the Preliminary Training School, and on September 11th the School re-opened with a full complement of pupils. To all we extend a hearty welcome, and wish you every success in your career. You have chosen a wonderful profession and a wonderful hospital in which to train. During the next three years you will have unrivalled opportunities of service to others, and of acquiring a wealth of experience. No matter how busy you may be, try to enter into human relationship with your patients, and when they are trying and difficult, remember that sickness affects the mind as well as the body. From you the patient or visitor may receive his first impression of the hospital, which may be a lasting one.

Nursing is an exacting training for the work carries with it grave responsibilities which you must be prepared to take as you become more experienced, but it need not be an onerous one. Go out as much as you can, play tennis at the cottage at Honor Oak Park, take an active part in the various recreative societies of the Guy's Hospital Nurses' League, and you will not lose your individuality or your sense of humour. Have regard for old established customs. They are probably carried out at the wish of the Founder of the Hospital, and have not hindered progress during the past two hundred years. You will have opportunities through the Nurses' Representative Council of leaving the mark of your generation on the Hospital.

Many of you will have finished your training at the commencing age of a few years ago, and then what a wide field of work is before you through which to choose your path! Public Health Work, District Nursing, Hospital Sister, Private Nursing, The Navy, Army, and Air Force Nursing Services, or, if you have a desire to travel, the Overseas Nursing Service. Give of your best, and the best will be returned to you.

The Medical Curriculum

1. The Sciences

THE matriculated student will, in his first year, study Inorganic and Physical Chemistry, Physics and General Biology, and at the end of this period, provided he has worked diligently in the laboratories, and attended the Lectures and Revision classes regularly, should have no difficulty in passing the First Examination for Medical Degrees. In his second year he will study Organic Chemistry, together with Anatomy and Physiology, and at the end of the second winter, provided, as before, that he has worked steadily from the commencement, should have little difficulty in passing the First Part of the Second Examination for Medical Degrees. Anatomy, Physiology and Pharmacology are then taken as the Second Part of this Examination at the close of the third winter, prior to commencing Clinical work in the wards.

From Medical and Dental students who are preparing for the Premedical Examination only six months' work is required, but those entering without previous knowledge of Chemistry and Physics will find that time hardly sufficient, and are usually advised to take the full "year" of three terms, or nine months.

The importance of practical work cannot be too greatly emphasised, and lectures and books can but supplement work done in the laboratory.

GUY'S HOSPITAL MEDICAL SCHOOL.

TIME TABLE. WINTER TERM, 1930.

SUBJECTS FOR FINAL EXAMINATION. MEDICAL.

Subject	Lecturer	Days and Times	Place	First Class or Lecture
Applied Anatomy	Professor Johnston	Wednesdays at 12 noon	Demonst'n Theatre	Wednesday, October 1
Forensic Medicine	Dr. Ryffel	Fridays at 4.30 p.m.	Class Room 3	Friday, October 3
General Pathology	Professor Donaldson	Lectures—Tues., Thurs. and Fridays at 12 noon Practical—Daily at 9 a.m.	Pathol'cal Theatre Path'cal Class Room	Thursday, October 16 Friday, October 17
Medical Pathology	Dr. Campbell	Weds. 9.30 a.m., Thurs. 4 p.m.	Museum	Wednesday, October 8
Surgical Pathology	Mr. Davies-Colley	Mon. and Thurs. at 4.45 p.m.	Museum	Monday, October 6
Operative Surgery	Mr. Hughes	To be announced later	Op. Surg Class Rm.	To be announced later
Ophthalmology	Mr. Ormond	Thursdays at 4 p.m.	Anatomical Theatre	Thursday, October 2
Radiology	Dr. Lindsay Locke	Tuesdays at 4 p.m.	Anatomical Theatre	Tuesday, October 14

ORGANIC CHEMISTRY, ANATOMY, PHYSIOLOGY, AND PHARMACOLOGY.

Subject	Days and Times	Place	First Class or Lecture
Organic Chemistry (2nd M.B., Part I)	Lectures—Weds. & Fridays 9.30 a.m. Pract.–Mons. 2-5 p.m., Thurs. 10-1 p.m.	Chemistry Theatre Chemistry Laboratory	Lectures—Friday, October 3 Practical—Thursday, October 2
Anatomy	Elementary Lectures— Mons. 9.30 a.m. Weds. 11 a.m. Senior Lectures (Neurology)— Tues. and Thurs. at 9.30 a.m. Revision Classes— To be announced later Practical Anatomy— Daily from 9.30 a.m. to 5 p.m. Primary F.R.C.S.— To be announced later Normal Histology Tues. at 2 p.m.	Anatomical Theatre Anatomical Theatre Demonstration Theatre Dissecting Room Demonstration Theatre Histology Laboratory	Wednesday, October 1 Tuesday, October 7 To be announced later Tuesday, September 30 Monday, September 29 at 2 p.m. Tuesday, October 7
Physiology	Elem. Expt. (All Junior Students)— Fri., 11–1 p.m. Sat., 10–12 noon Adv. Chem. (Senior M.B. Students)— Mons. and Weds., 11–1 p.m. *Clinical Physiology (All Students)*— Thurs., 12–1 p.m. Tutorial Classes— Elementary— (Junior Medical Students) Advanced— (All Senior Medical Students)	Experimental Physiological Laboratory Chemical Physiological Laboratory Clinical Theatre To be arranged	Friday, October 3 Monday, October 6 Thursday, October 9
Pharmacology	Mons. 4 p.m. Fri. 1.15 p.m.	Physiological Th'tre	Friday, October 3

CHEMISTRY, PHYSICS AND BIOLOGY.

Course	Subject	Lectures	Place	Practical Classes	Place
Pre-Medical Conjoint	Inorganic Chemistry	Tues. & Thurs. 9.30 a.m. First Lecture, Tues., Oct. 7, at 9.30 a.m.	Chemistry Theatre	Fri. 10–1 p.m. Thurs. 2–5 p.m. First Class, Thurs., Oct. 2, at 2 p.m.	Chemistry Laboratory
	Elementary Organic Chemistry	Thurs. 2–3 p.m. & Fri. 12–1 p.m. First Lecture, Thurs., Oct. 16, at 2 p.m.	Chemistry Theatre		
	Physics	Tues. & Thurs. 10.50 a.m. and Tues. at 12 noon. First Lecture, Thurs., Oct. 2, at 10.50 a.m.	Class Room IV	Mons. 10–1 p.m. and 2–5 p.m. First Class, Mon., Oct. 6	Physics Laboratory
Conjoint	Biology	Weds. 9.30 a.m., Thurs. 12 noon Fri. 9.30 a.m. First Lecture, Thurs., Oct. 2, at 12 noon.	Anatomical Theatre	Tues. & Fridays 2–4 p.m. First Class, Fri., Oct. 3, at 2 p.m.	Biology Laboratory
M.B. London	Chemistry	Tues. & Thurs. 9.30 a.m. First Lecture, Tues., Oct. 7, at 9.30 a.m.	Chemistry Theatre	Mons. 10–1 p.m., Tues. 2–5 p.m. First Class, Mon., Oct. 6, at 10 a.m.	Chemistry Laboratory
	Physics	Tues. & Thurs. 10.50 a.m., and Tues. at 12 noon. First Lecture, Thurs., Oct. 2, at 10.50 a.m.	Class Room IV	Thurs. and Fridays 2–5 p.m. First Class, Thurs. Oct. 2, at 2 p.m.	Physics Laboratory
	Biology	Weds. 9.30a.m., Thurs. 12 noon, Fri., 9.30 a.m. First Lecture, Thurs., Oct. 2, at 12 noon.	Anatomical Theatre	Weds. & Fridays 10.30–1 p.m. & Sats. 11–1 p.m. First Class, Fri., Oct. 3, at 10.30 a.m.	Biology Laboratory

GUY'S HOSPITAL DENTAL SCHOOL

TIME TABLE—WINTER TERM, 1930

Subject	Lectures	Place	Practical	Place
INORGANIC CHEMISTRY	Tuesdays and Thursdays at 9.30 a.m., commencing on Tuesday, October 7th	Chemistry Theatre	Thursdays at 3 p.m. and Fridays 10 a.m., commencing on Thursday, October 2nd at 2 p.m.	Chemistry Laboratory
ELEMENTARY ORGANIC CHEMISTRY	Thursdays at 2 p.m. and Fridays at 12 noon, commencing on Thursday, Oct. 16th.	Chemistry Theatre		
PHYSICS	Tuesdays and Thursdays at 10.50 a.m., and Tuesdays at 12 noon, commencing on Thursday, October 2nd	Class Room IV	Mondays from 10 to 1 p.m. and from 2 to 5 p.m., commencing on October 6th	Physics Laboratory
BIOLOGY	Wednesdays and Fridays at 9.30 a.m. and Thursdays at 12 noon, commencing on Thursday, October 2nd	Biology Laboratory	Tuesdays and Fridays at 2 p.m., commencing on Friday, October 3rd	Biology Laboratory
DENTAL METALLURGY ..	Mondays and Wednesdays at 12 noon, commencing on Monday, October 6th	Chemistry Theatre	Thursdays at 2 p.m., commencing on October 9th	Metallurgical Laboratory
DENTAL MECHANICS	Mondays at 4.0 p.m., commencing on Monday, October 13th	Anatomical Theatre	Fridays at 1.45 p.m., commencing on October 3rd	1st and 2nd Years' Laboratory
ANATOMY	(1) *Junior Lectures*— Mondays at 9.30 a.m., Wednesdays at 11 a.m., commencing on Wednesday, October 1st (2) *Demonstrations*— *(a) Bones— Tuesdays at 9.30 a.m., commencing on October 7th *(b) Soft Parts— Thursdays at 9.30 a.m. and Fridays at 10 a.m. commencing Thursday, October 9th.	Anatomical Theatre Anatomy Demonstration Theatre Anatomy Demonstration Theatre	Daily from 9 a.m. to 5 p.m., commencing on Tuesday, September 30th Dental Students who have completed one term's work in the Department must enter their names for "parts" in the Dissecting Room.	Dissecting Room
PHYSIOLOGY	Thursdays 10.30 a.m., commencing on Thursday, October 9th	Physiology Theatre	Thursdays at 11 a.m., commencing on October 9th	Physiological Laboratory
HISTOLOGY	Thursdays at 2 p.m., commencing on October 2nd.	Histology Laboratory		
PATHOLOGY	Wednesdays 11 a.m. commencing on October 1st.	Pathological Theatre	Tuesdays at 2.30 p.m. commencing on October 14th.	Pathological Class Room
DENTAL ANATOMY ..	Fridays at 12.15 p.m., commencing on October 10th	Physiological Theatre		
DENTAL HISTOLOGY	Mondays at 2 p.m., commencing on October 6th	Pathological Theatre	Mondays at 2.30 p.m., commencing on October 6th	Pathological Class Room
GENERAL SURGERY	Tuesdays at 1.15 p.m. Thursdays at 3 p.m. Fridays at 1.15 p.m. Commencing on Thursday, October 2nd	Class Room IV Class Room IV Clinical Theatre		
OPERATIVE DENTAL SURGERY	Times to be announced later			
DENTAL SURGERY ..	Tuesdays at 4.15 p.m., commencing October 14th	Physiological Theatre		

* N.B.—New Regulation L.D.S. Students in their Second Term of Human Anatomy must attend (*a*), and may attend (*b*) if they so desire.
Old Regulation L.D.S. Students and New Regulation Students in their Third Term of Human Anatomy must attend both (*a*) and (*b*).

Guy's men have no excuse for neglecting laboratory work. Students are strongly urged to form early the habit of spending their spare hours, apart from those officially allotted, in one or other of the laboratories. Reading should be left for the evening. After a day in the laboratory, reading a good text book will be found to give ample scope for thought. "Cramming," or the memorising of words and phrases, without a knowledge of the corresponding realities, is one of the worst intellectual habits a student can acquire, and in the long run invariably leads to failure.

CHEMISTRY AND PHYSICS

The student is often tempted to regard the study of Chemistry and Physics as one of very little use when once his preliminary examination is passed, but he will find in his study of the sciences of Physiology, Pharmacology and Pathology that a proper understanding of Physical and Organic Chemistry and Physics is invaluable and essential. That this is so is now fully recognised in the London University curriculum, which should be carefully studied by every London student.

BIOLOGY

Biology, like all the sciences, is properly studied in the laboratory, because things seen are better understood and remembered than things read or heard. Animals and plants are the true sources of a knowledge of biology, and more correct than the text books written about them. Acquire, therefore, the laboratory habit and record carefully what you observe. Use your books as reminders of the things seen. Draw much. It saves you from the habit of verbal memorising. The drawing of a diagram is the best way of testing the accuracy of one's knowledge in a descriptive science like biology. In the laboratory are also demonstrators whose duty it is to clear up your difficulties. Equip yourself with the necessary instruments. A microscope is needed at once. Its purchase requires care and advice. Students have been known to saddle themselves with an instrument that gives them unsatisfactory results for a whole year, and gets condemned in a later microscopical course. This is poor economy, as the difference in price between a good and poor microscope is small. If you are buying a secondhand instrument, bring it to the laboratory for examination by the demonstrators before you complete the purchase.

ANATOMY

The primary object of dissecting is to render oneself familiar with the structures of human anatomy and their relationships one to another. A good knowledge of human anatomy is essential to the medical student, owing to the great scope for application of this knowledge which is provided by medicine and surgery, and it is no exaggeration to say that the better a man knows his anatomy the more likely is he to succeed in these subjects. By handling and tracing the structures exposed in dissections, the student is enabled to form mental pictures which greatly exceed in value the plates and diagrams to be found in books, and it cannot be emphasised too much that the knowledge obtained by dissecting is more thorough, more lasting and more definite than the knowledge obtained by text books, however good the latter may be.

In addition, dissecting trains the fingers and develops the sense of touch and that delicate muscle sense which is so necessary to aid the eye in carrying out a delicate manipulation.

The basis of anatomical knowledge is a thorough acquaintance with the bones. These can only be learnt by handling the bone and making out each point on it as the description in the book is being read. Hence, it is very desirable to possess a half skeleton. (This may be had from Mr. Walker, the Senior Assistant in the Anatomical Department, who will also supply cases of instruments.)

Full use should be made of the Specimen Rooms and of the famous collection of Wax Models in the Gordon Museum. The latter are quite unique and of great value to the student who is revising his work.

Men who intend to take the Primary Examination for the Fellowship of the Royal College of Surgeons should attend both the course of Lectures for senior students in the second winter session—for time, *vide* notices—and also the special class for the Primary Examination.

Books and Instruments

The student requires a Manual of Practical Anatomy, in which the structures are described as they are exposed in the course of dissection. The best book for this purpose is Cunningham's *Practical Anatomy* (3 vols., 12*s*. 6*d*. each); it should be read before, during and after each day's work.

In addition a text book of Human Anatomy, in which the subject is described by systems, is necessary. Gray's and Cunningham's text books are both good.

Men who think that they may want to take the Primary Examination for the Fellowship of the Royal College of Surgeons will require a book dealing with Embryology and Morphology, and they will find that Keith's book on the subject contains all that is essential.

The following instruments are necessary : Three scalpels, two pairs of *dissecting* forceps, and two sets of "hooks." No other instruments are required.

Dental Students

The detailed knowledge which is demanded of the medical student is essential for the dental student only as regards the head and neck and the bones of the skull. Special demonstrations are arranged each term suitable to the requirements for the L.D.S. and B.D.S. Examinations.

PHYSIOLOGY

Physiology, which forms the basis upon which scientific medicine, surgery and midwifery rest, will require the most earnest attention on the part of the student during the short space of two years which he can devote to it, and he will find that his understanding of the medical, surgical and pathological problems which he will meet later on varies directly with the thoroughness of his physiological ground work. Some elementary work on the subject such as the book by Bainbride and Menzies should be read in order to obtain a general knowledge of the scope of the subject.

The student should attend the Lectures on Physiology—for times, *vide* notices—and also the tutorial classes, which are held by the demonstrators. During this time he should read the subject in some text book such as Starling's *Principles of Human Physiology*, Halliburton's *Handbook of Physiology*, or Howell's *Text Book of Physiology; Essentials of Physiology*, by Bainbridge and Menzies, affords a concise, yet readable, account of the subject. While attending the practical classes held during the winter, the student is advised to read *Practical Physiology* (published by Arnold).

Physiological Clinical demonstrations for senior students are held each week.

Candidates for the M.B. of London or other Universities must in addition attend the class in Advanced Practical Physiology, held twice a week during the second winter session, and this class should also be attended by men working for the first F.R.C.S. examination.

Those desirous of obtaining a wider knowledge should supplement the course of reading indicated above with original papers in the *Journal of Physiology*, with parts of *Recent Advances in Physiology*, by Lovatt Evans; *Principles of General Physiology*, by W. M. Bayliss; and *Applied Physiology*, by Samson Wright. Revision classes are held by the Demonstrators during the two months preceding the first F.R.C.S. and the M.B. examinations, and should be attended by all candidates.

A special course is held for candidates for the Honours B.Sc. of the University of London.

2. Pre-Clinical Period

THE extension by the Examining Bodies of the student's curriculum of study has allowed the addition of an extra period of three months preliminary instruction before the student actually embarks on his duties in the wards.

It has long been felt that the time allotted to the study of Medicine, in the limited sense, has of late years been encroached upon and curtailed by his duties in the Surgical Wards and the Special Departments, and the opportunity was gladly seized of redressing the balance by giving him extra tuition in medical subjects.

The object of the Pre-Clinical Period is to instruct the student in the routine methods of examination of patients and in the detection and interpretation of physical signs, so that on his entry into the Medical Wards he will be able immediately to derive full benefit from the teaching of the Registrars and Physicians without the laborious explanations and tedious insistence on elementary points necessary before the introduction of the scheme.

In addition to this instruction, which he receives from the Clinical Tutor in charge of the course, the student gets a course of Clinical Chemistry from Dr. Ryffel and Dr. Knott, Elementary Pathology, Minor Surgery and Bandaging from the Surgical Registrars, and instruction in the methods of examining the eyes, ears, nose, etc., from the heads of the departments concerned.

3. The Wards

SURGICAL WARDS

THE appointment of surgical ward clerk is the first of the appointments held by the student during his Clinical training. In many ways it is the best of all the appointments, as most of the teaching, both by the Surgeon and the Registrar, is for his special benefit. Furthermore, a reputation for keenness and ability earned in those early days will follow him and help him throughout the

rest of his time at the hospital. Each clerk is attached to one of the surgical units for three months, and it is his duty to record the history and progress of the cases allotted to him.

The wards are open to the student at 10 o'clock, and he should have written up the history of the case and, as far as possible, have examined the patient before the Registrar of the unit begins his round at 10.30, when each case is discussed and the report of the clerk confirmed or amplified. The student during this period will do well to confine most of his attention to the detection of the physical signs, and should procure from the Medical School Office a copy of the red book entitled *Instructions in Case-Taking, Surgical*, which he will find a very good guide to sound and systematic examination of the patients.

While he is acting as ward clerk the student attends a course in Elementary Pathology and Pharmacology, and at the same time has unrivalled opportunities of seeing dressings and operations, more especially during his "take-in" week. There will be much hard work and many late hours, but there will be also incalculable compensation in seeing and learning the practical points that will stand him in good stead. He is doing his own work of ward clerk, but must remember that he is learning also to be a dresser.

As a dresser the student spends two periods of three months. While the surgical work is very dependent on the dresser for its smooth efficiency and good results, the dresser must realise that he himself is very dependent upon his work, for it is during these six months that he lays the foundation of his surgical knowledge and sound after-care. Someone has said that every surgeon should be his own dresser, so that the dresser must appreciate the responsibilities that he assumes in thus deputising for his surgeon.

We have said very little about the actual tasks of the dresser; he should read the "standing orders" relative to his appointment, and from then on everything depends upon himself. He has been given a valuable appointment and one difficult to do well, but one that repays hard work almost more than any other appointment he can hold.

MEDICAL WARDS

To each medical ward clerk is allotted a certain number of beds, and he is expected to examine and write full reports on all patients who are admitted into these. Occasionally, it so happens that a patient is too ill to be examined except by the House-Physician and Physician, or that a case dies before the ward clerk has had an opportunity of seeing it. Under these circumstances he should obtain the history and an account of the symptoms, physical signs and progress of the case from the House-Physician, and should base his report on these data. It cannot be too strongly insisted that a report, however brief, must be written on every case, and it is of the greatest importance that *the diagnosis and remarks made by the Physician should be entered at once into the report.* Moreover, any errors detected by the Physician or Registrar in the original report should be immediately corrected. In the event of a patient dying, the ward clerk must obtain the abstract of the post-mortem findings and carefully enter it up, and it need hardly be said that all clerks should make every effort to see the post-mortem examination of any case they may have seen during life.

The medical wards are open to clerks from 10 till 12 noon, and from 1.30 till 6.30 in the evening. The Registrars begin their rounds at 10.30, and by that time a clerk should at least have full notes of the history of any new patient who may have been admitted into one of his beds, and he should have a full report in readiness for the Physician in the afternoon. Ward clerks should realise that they are expected to know the details not only of their own cases, but of every patient under their Physician. It is no excuse to plead ignorance because "this is not my case." If only a clerk will take the trouble to make himself conversant with each case in this way he will find at the end of his six months that an enormous amount of clinical material has passed through his hands, and he will probably have acquired enough knowledge of medicine to enable him to pass the Conjoint Final with but little additional reading. But so many men waste their time through sheer laziness in the medical wards, never realising that they are throwing away experience which would prove invaluable to them later on.

Again, the curriculum provides but six months for the study of pure medicine, whereas nine months are allowed for the pursuit of surgical appointments. Further, during their period of medical clerkship men are apt to take more time than is justified for the study of Pathology and Bacteriology, which they have neglected whilst in the Surgical Wards.

An hour spent in the wards after tea three or four times a week will give opportunities not only for going over cases and writing up reports, but also for seeing the House-Physician tap chests and abdomens, etc. The treatment, too, which each case is receiving, may well be studied at this time.

As regards reading, the best method is to study the text book account of each disease as one

comes across it in the wards or in discussion, and afterwards to compare, if possible, the text book description with the symptoms and signs presented by the patients. At the same time the most important medical journals should be read regularly, for by this means only can the student keep himself in touch with modern work. The *B.M.J.* and the *Lancet*, the *Quarterly Journal of Medicine*, as well as the *Journal of the American Medical Association*, are especially recommended.

Books that may be recommended are the following: The well-known text book by Osler, Dr. Poulton's revised edition of Taylor, Dr. Conybeare's *Text-book of Medicine*, and *Physical Diagnosis* by Cabot. For second three months ward clerks, the most important monographs in Allbutt's or Osler's *System of Medicine* will prove valuable and interesting reading. For laboratory work Hutchinson and Rainey's *Clinical Methods*, or Dr. French's book will be useful.

OBSTETRIC & GYNÆCOLOGICAL WARDS.

After finishing appointments in the Medical and Surgical wards the student is posted to the Obstetric Department for six months. During the latter half of this time he is also attached to the Physician for the Diseases of Children. The Obstetric Dresser is responsible for case-taking in the wards and at Out-Patients, assists at operations, and during one month acts as Extern in the Maternity Charity. The Department has 26 beds reserved for gynæcological cases and 21 for the reception of cases presenting complications in pregnancy, labour and the puerperium and normal labours.

As an intervening link between the Obstetric and Children's Departments is the Salomons Centre, in which the health of mothers and infants is fostered by the practice of preventive medicine.

With this wealth of clinical material it should be possible for every student to obtain a sound knowledge of methods of diagnosis and treatment founded on no small experience. It is, however, recognised by teachers of Gynæcology and Obstetrics that this desideratum is not always attained. It is undoubtedly true that many a young practitioner has to admit a regrettable ignorance of the ailments which afflict his female patients and of the proper management of the pregnant, parturient and lactating woman. And these subjects form the foundation upon which a successful family practice is built. Responsibility for this sad state of affairs hardly rests with the student, but he will do well if he starts his clinical work with the firm determination to avoid the pitfalls that beset his feet. He must realise that practical experience in diseases peculiar to women cannot be acquired in the space of the three months which he will spend in Queen Ward. As he passes from one appointment to another he must resist the tendency to develop the compartmental mind and must endeavour to cultivate a wide outlook on medicine as a whole.

The study of the physiology and pathology of the functions of woman should be begun at the outset and continued throughout the period of clinical training. The man starting as Surgical Ward Clerk should include among his initial purchases a text book on Gynæcology, for purposes of reference, and should make a point of attending the lectures of the Obstetric Surgeons. He should also avoid no opportunity of acquiring the "tactus eruditus" so essential to the accurate diagnosis of pelvic disorders; the inherent impossibility of permitting a class of students to examine women patients one after the other renders it imperative that this experience be gained over a considerable period of time.

The study of midwifery he may well leave until he becomes an Obstetric Dresser; the art of the accoucheur cannot be learnt from books.

4. Pathology and Bacteriology

PATHOLOGY

WHEN the student has passed the Second Conjoint or M.B. Examination, he is halfway through his medical curriculum, and he should have gained a working knowledge of the functions of the body in health. This knowledge is an essential preliminary to the study of the most important of the medical sciences, viz., Pathology, or the study of the functions of the body in disease. Throughout his life the student, if he continues to study and practise medicine, must ever keep pathology in the foreground. It is desirable, therefore, that the study of pathology be begun as soon as possible and continued throughout a medical career.

The subject is an exceedingly large one, and it is customary to divide it into several sections:—

1. General and Special Pathology;
2. Morbid Anatomy;
3. Morbid Histology;
4. Bacteriology;
5. Chemical Pathology.

Due attention must be paid to each of these branches in proportion to their importance relatively to one another and to clinical medicine and surgery as a whole.

During the pre-clinical period the student must attend classes and demonstrations in elementary pathology, bacteriology and chemical pathology.

During the Autumn, Winter and Spring Terms, systematic lectures and demonstrations in pathology and bacteriology are given. Three lectures and three practical classes are held weekly, the former at 9 a.m. and the latter at 12 noon.

Regular attendance at these classes is imperative, and the attractions of the wards and of clinical work should on no account be allowed to interfere with laboratory studies.

While medical ward clerks, during their tenure of office, should attend classes on chemical pathology, it is essential that throughout all ward appointments no opportunity should be missed of continuing the study of pathology.

Apart from set lectures and classes, students and house-officers are cordially invited to make use of the resources and facilities provided by the laboratories in order to add to their knowledge of a subject that lies at the root of all successful clinical work.

Every man should, as far as is practicable, follow out the pathology of each and every one of his cases.

Is a bacteriological investigation to be made? He should follow it out as far as possible. Is a portion of tissue removed for microscopical examination? He should see and examine the section. Is a chemical examination demanded? He should endeavour to see the analysis carried out. He should never miss an autopsy on any one of his cases, and should make a point of keeping a special note-book in which he can enter the clinical history and progress of a case, the post-mortem findings, if the case comes to autopsy, and the result of his histological examination together with a general review of the case in the light of that further evidence.

Set hours cannot be given for these lines of study; they must be fitted in as time and opportunity permit. In short, efforts should be made to see as much practical work and as many demonstrations in pathology as can be arranged. There are few days when no pathology can be learned. Post-mortems are held nearly every day at 1.30 p.m., except on Wednesdays and Saturdays, when the hours are 12.30 p.m. and 11.30 a.m. respectively. Attendance at these will amply repay the time expended.

Informal classes in Pathology are held three times weekly during the October and May terms. These, though primarily intended for M.B. students, are suitable for, and should be attended by, those sitting for Part I of the M.B.Cantab. and the Final M.B. of Oxford or London University.

During the later clinical appointments certain students may hold a few pathological posts, such as Student Demonstrator, Assistant to the Demonstrators of Morbid Anatomy, Student Assistant in the Bacteriological Department. One or more of these may be held in turn, and they prove exceedingly valuable from the learners' point of view.

There are many books which might be recommended, and what suits one student may not prove attractive to another. The following, however, will prove adequate for all the students' purposes: in Pathology either MacCullum's, Muir's, or Beattie and Dickson's; in Morbid Histology, Donaldson's Handbook, and for Bacteriology either Muir and Ritchie's Manual or Bigger's Handbook.

BACTERIOLOGY

Bacteriology, although for a time regarded by the clinician as affording information of merely academic interest, has now made a most profound impression upon the theory and practice of both medicine and surgery, and by providing specific treatment for many microbial infections has emphasised the necessity and stimulated the demand for exact diagnosis, and it is towards this direction that the student's interest is guided by the class in Practical Bacteriology.

Particular attention is devoted from the first instance to the technique of various investigations undertaken in connection with ward work. Thus the student himself examines sputum, pus and morbid exudates by various methods to demonstrate the associated bacteria. He is instructed in staining methods and the practical work of culture making, and is, moreover, encouraged to repeat for himself during the intervals between successive classes any observations and experiments previously carried out, in order to equip him for the performance in general practice of those more obvious methods of bacteriological diagnosis which experience has shown are both reliable and valuable. Demonstrations are also given upon the life history of the most important of the organisms which are pathogenic to the human race, and by the study of "pure cultures" an attempt is made to impress the chief characteristics of each upon the mind of the student, whilst the changes such organisms undergo or produce when they gain entrance to the human tissues are carefully emphasised.

Throughout the course considerable stress is laid on the further applications of bacteriology to treatment, including the use of various remedial agents such as sera and vaccines, which have been elaborated in the bacteriological laboratory for the treatment of disease, together with those facts and theories relating to natural and acquired immunity upon which bacteriological therapy is based.

5. The Special Departments

THE CHILDREN'S DEPARTMENT

In-Patient Accommodation—Dr. Cameron has under his care 14 cots in the Children's Ward. On two days in the week, at present on Tuesdays and Thursdays at 2 p.m., Dr. Cameron goes round the ward and gives clinical instruction.

Out-Patient Department—Children under 10 years of age are seen in the Children's Department at Out-Patients on Mondays, Wednesdays and Fridays from 9.30 until 1 o'clock. Dr. Cameron attends on Mondays and Fridays at 10 a.m., when clinical instruction is given.

The Salomons Centre is for the care of the mothers and children of the Midwifery Charity; attendances at the Centre are made by dressers in the Obstetric Department.

OTO-RHINO-LARYNGOLOGICAL DEPARTMENT

This Department is organised on the unit system. There are two units, one under the care of Mr. Mollison, the other of Mr. Layton. Patients are seen in the Out-Patient Department, admitted when necessary to the special wards, Dorcas and Christopher, and returned to the Out-Patient Department. This arrangement allows members of each unit to follow up the cases. Mr. Mollison's firm sees out-patients on Tuesdays and Fridays at 11.30 a.m., Mr. Layton's on Mondays at 9 a.m., and Thursdays at 11.30 a.m.

Dressers are appointed to the respective firms, and have every opportunity of becoming expert in the technique of examination of the ear, nose and throat, and of gaining experience in diagnosis and treatment. Large numbers of school children are seen. Minor operations are performed in the Out-Patient Department; these include, amongst others, operation for the removal of nasal and aural polypi, and of tonsils and adenoids, and for the lavage of the maxillary antrum; these operations are performed under the supervision of the Surgeon or the Clinical Assistant.

Twenty-seven beds and six cots are now allotted to the Department, and each firm operates twice a week. Mr. Mollison and Mr. Layton "take-in" during alternate weeks, and emergencies are admitted under the care of the firm on duty.

THE OPHTHALMIC DEPARTMENT

The Ophthalmic Department of the Hospital is in charge of the three Ophthalmic Surgeons. They are helped by three Assistants, one House Surgeon and Dressers. The Dressers are appointed four times a year for a period of three months, and assist the Surgeons at Out-Patients and at operations, and are responsible for the recording of the cases both in the wards and at Out-Patients. The Ophthalmic Department is an open field for any student to explore as far as he is willing and able, the amount of clinical work being sufficiently great for him to see all the more ordinary and common diseases of the eye in the space of three months.

The student will soon find that he is quite unable to form any opinion of his own on an ophthalmic case until he has mastered the use of the ophthalmoscope and can readily and accurately decide what is the refraction of the eye, and if the "fundus oculi" is healthy and normal. The theory of retinoscopy can be taught and is simple; the practice, however, requires constant application by the student before he can hope to obtain any sort of facility in it. The difficulties are mainly initial ones, and any time and trouble expended in mastering them will well repay any man in after life when he has qualified and is in practice.

MEDICO-NEUROLOGICAL CLINIC

Advanced Ward Teaching for Post-Graduates and Students is given on Tuesdays at 2.15 p.m.; Drs. Hurst, Marshall. Symonds, Gillespie and Witts meet in Mary Ward for the combined round at which a discussion is held on a series of cases.

NEUROLOGICAL DEPARTMENT

This Department is under the direction of Dr. C. P. Symonds and now provides facilities for a full three months clerkship, which offers excellent opportunities to those who desire practical experience in one of the most difficult branches of medicine. Wednesday and Saturday mornings are devoted to Out-Patient work; Dr. Symonds holds a teaching round on Thursday mornings in the Eye Ward, while the Registrar usually goes round on Tuesdays and also supervises the operation of lumbar puncture on out-patients selected for that test.

DEPARTMENT OF PSYCHOLOGICAL MEDICINE

Now separated from the Neurological Department and providing a full three months course of Clinical tuition. In addition to Lectures and Clinical Demonstrations held at a mental hospital during the summer term, Dr. R. D. Gillespie is also responsible for a series of addresses on Normal Psychology during the spring session. Out-patients are seen on Wednesday and Saturday mornings.

THE DERMATOLOGICAL DEPARTMENT

Out-Patient Days—Mondays, New Cases, 11.30 a.m. Old Cases, 12 noon.

Tuesdays, New Cases, 9.30 a.m. (children); 10 a.m. (adults). Old Cases, 1.30 p.m.

Thursdays, New Cases, 9 a.m.; Old Cases, 9.30 a.m.

Wards—There are three male and three female beds in the Eye Wards for Dermatological cases requiring careful supervision or treatment in bed.

Instruction in the diagnosis and treatment of diseases of the skin is given in the Out-Patient Department, and clinical demonstrations on selected cases are held from time to time.

THE GENITO-URINARY AND ORTHOPÆDIC DEPARTMENTS

These two appointments are now taken together, and have a common House Surgeon. Students acting as Dressers in the Genito-Urinary Department have excellent opportunities of acquiring knowledge which will be useful to them in actual practice and examinations. Out-Patients are seen on Tuesday and Friday afternoons.

The Department has 7 male in-patient beds in Christopher, 2 female beds in Queen, and 1 cot in Evelyn.

Students should realise that their attendance at this Out-Patient Department is very necessary, as is evidenced by the very advanced state of disease in which some patients arrive for examination.

The Orthopædic Department comprises a large out-patient clinic and a number of beds devoted to patients suffering from deformity. Out-patients are seen on Monday and Wednesday afternoons, and Minor Operations performed on Friday afternoon, and in the Out-Patient Department the student will meet with every variety of deformity, congenital and acquired. Considerable facilities are afforded for experience in the relief and cure of all chronic diseases of bones, joints, muscles, etc. Instruction in the principles and most modern practice in the use of appliances, plaster technique, and the more useful forms of Physio-Therapy is given by Mr. Trethowan, the Orthopædic Surgeon, and the Registrar. Numerous operations of a minor nature are done, such as manipulations for stiff and painful joints, correction of misshapen and rickety limbs, correction of scoliosis and immobilisation of tuberculous joints.

The in-patient beds are devoted to the most serious operative cases, such as extensive tendon transplantations, correction of malunited fractures, bone-grafting, the making of new joints, etc. Guy's is a pioneer hospital in possessing an excellent workshop for the manufacture of every form of splint and appliance.

It is in the Orthopædic Department that the principles underlying the mechanical disabilities of the limbs and spine are emphasised and their explanation made clear, and the experience to be gained here is invaluable. The great utility of orthopædic surgery has become evident to very many during the war.

THE MASSAGE DEPARTMENT

The New Department is now in full working order, and patients are treated between the hours of 2.30 p.m. and 4.30 p.m. on Mondays, Tuesdays, Thursdays and Fridays, and between 9.30 a.m. and 12 noon on Wednesdays and Saturdays.

The point of interest to Medical Students is to see the work carried out on patients by Massage and Medical Gymnastics. A large variety of cases are being treated daily, which include fractures, stiff joints, dislocations, nerve injuries and disease, lung and heart disease, congenital conditions and poor development in children, etc.

THE TUBERCULOSIS DEPARTMENT

The Tuberculosis Department is a reference Department for out-patients suffering from diseases of the chest. Patients attend on two days a week, Thursday afternoons and Monday evenings. For suitable cases arrangements are made for admission to sanatoria. The patients return to the Out-Patient Department after leaving the sanatorium. The Department provides extensive opportunities for studying methods of investigating early and doubtful cases of pulmonary tuberculosis, also for observing special forms of treatment such as artificial pneumo-thorax. A special appointment is now connected with this Department.

THE DEPARTMENT FOR VENEREAL DISEASES

This Department is open from 9 a.m. to 8 p.m. on all week days, and from 10 to 12 noon on Bank Holidays.

Treatment is carried out for all venereal diseases in women, men and children, and patients may be referred from other departments at any of these times.

Students may attend the male section any evening from 5 p.m. to 7 p.m., and Dressers in the Gynæcological Department may attend the female section on Mondays from 5 p.m. to 7 p.m. or Wednesdays from 2 p.m. to 5 p.m.

Demonstrations are held on Thursdays at 5 p.m. in the Demonstration Theatre in this Department.

Five Dressers are appointed to the Department every three months.

PRACTICAL PHARMACY, MATERIA MEDICA AND DISPENSING

One of the many important things all medical students must know is how to write a prescription. It may even be necessary for the majority, when qualified, to be able to dispense the same. All

students, therefore, would be well advised to acquire as much knowledge of the subject as they can

The student is taught, practically, how to dispense the different medicinal preparations; he learns to write prescriptions, due regard being paid to doses and incompatibilities.

The recognition of crude drugs, their active principles and preparations, forms part of the course, which is conducted by the Hospital Pharmacist and covers the syllabus of the Practical Pharmacy of the Conjoint, 2nd M.B. London, 2nd M.B. Camb. (Part III) and the 2nd B.M. Oxford.

ELECTRICAL AND ACTINOTHERAPEUTIC DEPARTMENT

The treatments carried out in this Department include the following: diathermy, high frequency, the application of the constant, faradic and sinusoidal currents, radiant heat, and static electricity, treatment by the Finsen and mercury vapour lamps and radiotherapy.

A special Department has, for some time, been opened for artificial sunlight treatment.

A large number of cases are treated in the Department: Chronic joint conditions, nerve injuries, wasted muscles, skin diseases such as ringworm, psoriasis, eczema and rodent ulcer. There are also a large number of cases of malignant disease undergoing treatment with X-rays and radium.

FRACTURE DEPARTMENT

This Department deals with all fracture cases which are treated as out-patients throughout; they attend on Thursday afternoons at 1 p.m. The appointment of dresser in this Department is a useful one, and is usually held concurrently with one of the later appointments that a student can obtain. Much experience in the treatment of uncomplicated fractures is obtained; at the end of the afternoon, plasters are applied to or removed from the various patients seen.

6. Books

ADVICE on this matter is extremely difficult to give, for individual needs are almost as varied as the length of individual pockets, and the adornment of a virgin bookshelf is bound to depend on both these factors. Except in the case of certain essentials for routine work, such as the dissecting room manuals, it is perhaps better to postpone the inevitable visit to the bookseller and first to consult the various tutors and demonstrators in the subjects concerned. They will be more than willing to extend any suggestions made under various headings in this issue of the *Gazette*, and their experience will enable them to advise that blend of old and new best fitted to the individual case.

The rapid advance in medical knowledge unfortunately renders the second-hand book almost worthless except in the case of Anatomy, where the advances, though many and real, are not apt to be so revolutionary as in Physiology and Medicine itself. A Physiological text book probably becomes out of date in less than a year, a text book of Medicine in two or three years at least, so that in these subjects at any rate recent editions are essential.

All that is most distinctive in current Guy's teaching is to be found in the *Guy's Hospital Reports*, which contains articles written for the most part by members of the Hospital Staff. The unqualified man has the special privilege of purchase at a much reduced price, an advantage that he will be wise not to neglect.

A great number of publishers are responsible for medical books, and a just estimation of the rival claims for their various productions is quite beyond the scope of this article. Mr. Humphrey Milford at the Oxford University Press offers a wide range of medical works of uniform excellence in subject matter, binding and printing. Messrs. Churchill publish Taylor, Gask and Wilson, the new *Recent Advances Series*, and many other well known works. E. & S. Livingstone of Edinburgh present books containing the valuable teaching that emanates from both sides of the Tweed; they also cater for the hard-pressed student in an extensive *Catechism Series*, intended to aid his last minute revision. Baillière, Tindall & Cox are responsible for the large Rose and Carless and a small synopsis series in their well-known *Aids*. Many splendid books are published by John Murray, Faber & Gwyer, Ltd., Cassell & Co., Longmans, Green & Co., Macmillan & Co., John Bale, Sons & Danielsson, Edward Arnold, and Constable, while Lewis of Gower Street sponsors a number of books having a specialist flavour—such as Rawling's *Surface Markings* and Martindale's *Extra Pharmacopœia*, to select at random. Messrs Lewis also run an excellent medical circulating library, which should prove invaluable to the student who wishes to dip briefly into all the latest books. This is assisted by reference to their catalogues, which can, if desired, be purchased. Messrs. Foyle, of Charing Cross Road, specialise in second-hand books and also in those on sporting, as distinct from scientific subjects.

Mr. H. H. Grattan, in the Borough High Street, is the official bookseller to the Hospital, and is able to supply most of the books in common demand over the counter; any others he can be relied upon to obtain as quickly as possible.

To the Dental Student

By W. Kelsey Fry, Esq., M.C., L.R.C.P., M.R.C.S., L.D.S., Assistant Surgeon

OUR Editor has asked me to pen a word of welcome to you, and I gladly consent to avail myself of such privilege. On behalf of all my colleagues on the staff, I extend to you a very sincere and hearty welcome to Guy's. We all look back with the greatest pleasure to our student days, for it was during those happy times that we first realised the true significance, privileges and responsibilities, which membership of our beloved institution carries with it.

You are now being initiated into this world-wide fellowship of men who regard Guy's with the greatest affection and pride, and it will rest with you to carry on the great traditions, principles and achievements, which have made Guy's famous throughout the world.

We congratulate you heartily on your entry into the dental profession, the status of which has been considerably raised in recent years by the earnest work and achievements of those who have previously stood in your places, and it is to you that we will look in the future to carry on the work of a gradual realisation of our ideals, and the continued uplifting of dentistry to the high plane to which it undoubtedly belongs as one of the main branches of medicine.

To those of you who are about to embark upon your pre-dental studies of chemistry, physics and biology, I would like to stress the importance of these subjects, which form such a necessary stepping-stone to those which follow, and the full knowledge of which is so essential for the complete understanding of the subsequent courses.

To you who have completed these courses and are now entering on your first and second year studies, I would like to draw attention to the fact that you will be expected to complete your anatomy and physiology, dental metallurgy and dental prosthetics. To me it is a source of anxiety that there is so much to be completed during this period, and my advice to you is to devote as much time as possible to dental prosthetics, at the same time not neglecting anatomy and physiology, with the idea in mind of completing the latter subjects in the first year, so that you will have your second year to concentrate upon your dental prosthetics.

I mention this fact because I am more and more realising the extreme importance of this branch of dentistry, and it is only those of you who become proficient in it who can hope to achieve the success aimed at in your future practices. Craftmanship is the undoubted basic fundamental of surgery, and still more so of dental surgery, and I cannot urge you too heartily to put your whole soul into the attainment of this art.

During the latter part of your studies you will be called upon to work at the chairside, and it is at this time that you will be required to maintain the reputation and fame of Guy's as a charitable institution, by devoting as much care, skill and attention to your patients as you will hope to do to your future private patients.

Remember the honour and good name of Guy's is in your keeping, and we trust you to pass it on unsullied and enhanced to those who will follow in your footsteps.

The Dental Curriculum

THE Dental Student is supplied at the Medical School Office with the Prospectus, Standing Orders, List of Instruments, Calendar and Clubs' Union Book.

These pamphlets should be carefully read in order that acquaintance may be made with the general arrangements of the School and the scope of the work upon which the student will become engaged.

Notices regarding the time and place of Lectures are to be found posted up by the main entrance of the Dental Department.

Instruments having been purchased at a dental depôt, the student should satisfy himself that he has been supplied with all of those described in the Hospital list, and have them inspected by his demonstrator.

It is inadvisable to purchase instruments before they are required. Instruments for prosthetic work are required for the B.D.S. course at the commencement of the second year, and for the L.D.S. course at the commencement of the first year. Clinical instruments are required for the B.D.S. course at the commencement of the fifth year, and for the L.D.S. course at the commencement of the third year.

Among the various depôts at which instruments may be purchased are the following: The Amalgamated Dental Co., Broad Street, Golden Square, W.C., and 16, St. Thomas's Street, S.E.1; The Dental Manufacturing Co., Alston House, Newman Street, W.; Cottrell & Co., 15–17, Charlotte Street, W.1; L. Porro, Ltd., 33, New Cavendish Street, W.1.

The course of study for the B.D.S. London covers a period of five years, of which the first year consists of Physics, Inorganic Chemistry and Biology. The second year is occupied with the study of General and Dental Anatomy, Physiology, Pharmacology and Dental Prosthetics. The study of these subjects is also continued in the third year, together with Pathology, Bacteriology and Surgery. Clinical work in the wards, Surgery, Medicine, Anæsthetics, Pathology and Bacteriology, together with Dresserships in the Extraction Rooms, Dental Metallurgy and Dental Prosthetics constitute the fourth year's work, and the fifth year is occupied by purely Dental subjects, these being Clinical work in the Conservation Room, Orthodontics, Operative Dental Surgery and Dental Surgery and Pathology.

L.D.S. students who come under the New Regulations must pass the Pre-Medical Examination in Chemistry and Physics before they can commence their four years' course. Subsequently, their first term is devoted to Dental Mechanics and Elementary Anatomy and Physiology, and it is important that the student gets a good grounding in the former at this early stage. During the remainder of the first year the student continues his work in these subjects and takes Part III(*a*) of the First Professional Examination at the end of the period. In his second year he studies Dental Metallurgy and completes his training in Dental Mechanics. In his third term of this year he attends Lectures on Dental Anatomy.

Third year students for the L.D.S. commence the Clinical courses with a period of probationary work upon the phantom head. The operative course, conducted by a Staff demonstrator, is very comprehensive. It includes most of the operations that the student will subsequently be called upon to perform upon patients, namely, gold and other fillings, crowns, inlays and the treatment of devitalised and septic teeth. These operations upon the dummy form an excellent ground work in operative dentistry.

Thereafter the course of work consists in holding and diligently carrying out the work of the following appointments: *Probationer Dressership in the Conservation Room; *Dressership in the Conservation Room; *Dressership in the Children's Department; Dressership in the Ordinary Extraction Room; Dressership in the Gas Extraction Room; Casualty Dressership; Clerk to Anæsthetist.

A student, apart from those holding the post of Assistant Dental House Surgeon, is not allowed to work in the Conservation Room unless he holds one of the appointments marked *.

The Dental Anatomy and Physiology examination is taken in the second term of his third year.

An optional X-ray course may be taken by the student in his final year.

The time varies, according to whether the course for the B.D.S. or L.D.S. is being taken, at which a student will come into actual contact with Hospital patients, but he should always endeavour to be punctual in his appointments with them. There is nothing more irritating and annoying to a patient than to be kept waiting unnecessarily; it also delays to a very great extent the easy working of the Department.

Further, the student should remember that the cultivation of a courteous and gentle manner towards all patients will become in the future probably the greatest asset in his private practice.

Dental students will profit by following the practice of the Special Departments of the Hospital, *e.g.*, Eye, Throat, Ear. They will also have numerous opportunities of observing the more remote effects of dental disorders in the General Wards and Out-Patient Department.

Students in difficulties about their work and needing advice are invited to consult the Dean, Sub-Dean, Senior Dental Officer or any other member of the Staff, who will be pleased to do what they can to promote their interests.

*Courses on Gingival Hygiene, local anæsthesia, and fourth year demonstration in operative dental surgery will also be attended.

The Pupils' Physical Society, 1930-31

By A. C. Hampson, M.C., M.A., M.D., M.R.C.P.

Hon. President—Sir Charters Symonds, K.B.E., C.B., M.S.

Hon. Vice-Presidents—Sir William Hale-White, K.B.E., M.D.; Sir W. Arbuthnot Lane, Bart., C.B., M.S.; John Fawcett, M.D.; A. P. Beddard, M.D.

Presidents—W. H. Bradbeer; J. Croot; W. J. Ferguson; J. T. Irving; J. M. Lees; H. G. McGregor; E. R. Mellon; N. S. Plummer; P. V. Reading; J. M. Robertson; S. Shone; C. K. Simpson; D. B. Smallshaw; G. V. Steward; R. Stewart-Harrison; T. F. Todd.

Hon. Secretaries—A. C. Hampson, M.D., M.R.C.P. D. W. C. Northfield, F.R.C.S., L.D.S.

THE Pupils' Physical Society is a direct descendant of the older Physical Society founded in 1771, which was one of London's oldest Medical Societies, The minute books of the Society are preserved in the Wills Library, and thanks to a recent discovery of some missing volumes, the records are practically complete right back to this early date. The older organisation ceased to exist in 1852, partly owing to the competition of the Medical and Chirurgical Society—now the Royal Society of Medicine—which was founded in 1805.

The Pupils' Physical Society was originally started in 1830 as a purely Students' Society for the discussion of subjects of medical and surgical importance, for the showing of interesting cases, and for the reading of papers. The functions of the Society are the same to-day as they were a century ago, and it cannot be too strongly emphasised that it is essentially a students' organisation. Its members are the members of the Clubs' Union. It is managed by a committee consisting of not more than 16 Presidents, elected by the Society from among the senior students and house officers, and the two Honorary Secretaries.

The meetings are held, as far as possible, on alternate Thursday evenings during the winter months. The programme for the coming session, 1930–1931, is herewith presented, and it is hoped that the newer students will study it and reserve these dates. No meeting can be singled out as being more interesting than the others. The clinical and pathological meetings give opportunity for showing cases and specimens that otherwise might be missed, and it is no exaggeration to say that the best cases in the Hospital are to be seen collected together on these occasions only.

The combined meetings with the Medical and Physical Society of St. Thomas's Hospital, and with our own Physiological Society are always well attended, and the discussions that follow these meetings are amusing and stimulating. The papers that are read before the Society represent the outcome of much personal study, and should never be missed.

All members of the Clubs' Union are invited to take a personal share in the activities of the Society during the coming season, which promises to equal, if not surpass, all previous years.

1930. *Programme*, 1930–1931.

Thurs., Oct. 9 — 8 p.m. Opening Meeting. Clinical and Pathological, at which the Hon. Vice-Presidents will be present. Chairman: Sir Charters Symonds.

Thurs., Oct. 23 — 8 p.m. Clinical and Pathological Meeting. Chairman: Mr. Bradbeer.

Thurs., Nov. 6 — 8 p.m. Paper by Mr. Batchelor. "Goitre." Chairman: Mr. Croot.

Thurs., Nov. 20 — 8 p.m. At Guy's Hospital. Joint Meeting with the Medical and Physical Society of St. Thomas's Hospital. Chairman: Mr. Ferguson.

Thurs., Dec. 11 — 8 p.m. Clinical and Pathological Meeting. Chairman: Mr. McGregor.

1931.

Thurs., Jan. 15 — 8 p.m. Paper by Dr. L. J. Witts. "The Life of the Red Cell." Chairman: Mr. Lees.

Tues. Jan. 27 — 4.45 p.m. Joint Meeting with Guy's Hospital Physiological Society. Subject to be arranged. Chairman: Mr. Irving.

Thurs., Feb. 12 — 8 p.m. Clinical and Pathological Meeting. Chairman: Mr. Mellon.

Thurs., Feb. 26 — 8 p.m. At St. Thomas's Hospital. Joint Meeting with the Medical and Physical Society of St. Thomas's Hosp.

Thurs., Mar. 12 — 8 p.m. Clinical and Pathological Meeting. Chairman: Mr. Plummer.

Thurs., Mar. 26 — 8 p.m. Paper by Mr. McArdle. "Œdema." Chairman: Mr. Reading.

Thurs., April 2 — 8 p.m. Clinical and Pathological Meeting. Chairman: Mr. Robertson.

Thurs., April 16 — 8 p.m. Reading of the Treasurer's Prize Essay. The Subject will be: "The Clinical Varieties of Dyspnœa and their Physiological Interpretation." Chairman: Mr. Stone.

THE SOCIETY'S PRIZES

In addition to the Treasurer's Prize, the following prizes are awarded by the Society:—

The Beddard Prize; to the member who most distinguishes himself in the demonstration of clinical cases.

The Laidlaw Prize; to the member who shows specimens, or reads a paper, of the greatest pathological interest.

A prize of £10 for the best paper read before the Society during the Session.

A prize of £5 for the member who most distinguishes himself in the Discussions.

The Physiological Society

THE Guy's Hospital Physiological Society was founded in 1901, and is thus the oldest Physiological Society in London. Its founder, Prof. M. S. Pembrey, is still its president, and his very active interest in the Society in no small measure contributes to its well being.

The past season has been most successful; membership being greater than ever before, with over 130 annual members and several half-year members.

Beside the ordinary fortnightly meetings of the Society, at which members read papers which were afterwards discussed, the Society had the pleasure of entertaining members of the University College Physiological Society. At this joint meeting, which was in return for one the Society attended at University College last year, a debate took place on the motion that "This House Deplores the Falling Birth Rate of this Country." After a lively debate the motion was carried. It is to be hoped that in the coming season another meeting with University College can be arranged.

The Annual Joint Meeting with the Guy's Hospital Physical Society dealt with Bone Formation and Repair. Mr. A. G. Potts, who read a paper on the Physiological Aspect of the Subject, was successful in gaining the President's Prize for the best paper read before the Society during the season. The annual dinner was a great success and has been reported in a previous number of the *Gazette*.

For students new to the Hospital, some further particulars may be of interest. The Society is not a constituent of the Club's Union. The annual subscription is, however, only 3/6. All students are invited to join and are, indeed, advised to do so. Not only do the papers offer a very attractive way of learning the newer work which has been done on various subjects; but the discussions in which all members are urged to join offer a valuable opportunity of growing accustomed to speaking in public.

The first year man, many of whom join the Society, need not think that because he has no knowledge of physiology he will feel out of his element. At all meetings points of general interest are brought up in the discussions. Last year a paper was read by a man studying for his first M.B. Examination. It is hoped that such another paper can be arranged in the coming season.

The subscription includes the cost of the tea and tobacco supplied at the meetings. All will be welcomed at the Annual General Meeting which will be held in October on a date to be announced later. At this meeting the officers for the coming season will be elected and the names of prospective members taken. R.L.S.

Guy's Dental Society

President—H. C. Malleson, Esq., L.R.C.P., M.R.C.S., L.D.S.

Vice-Presidents—F. N. Doubleday, Esq., L.R.C.P., M.R.C.S., L.D.S.; F. J. Pearce, Esq., L.D.S., D.D.S.; E. A. Lloyd, Esq., L.D.S.; A. Bulleid, Esq., L.R.C.P., M.R.C.S., L.D.S.; E. B. Dowsett, Esq., D.S.O., L.R.C.P., M.R.C.S., L.D.S.; F. S. Warner, Esq., L.R.C.P., M.R.C.S., L.D.S.

Hon. Treasurer—J. W. Mansie.

Hon. Secretary—E. V. B. Widdowson.

Dental Correspondent—R. W. F. Brotherton.

Committee—First year, E. Sampson; Second year, J. M. Higgins; Third year, L. H. Smith; Fourth year, G. S. Loader; Any year, R. J. Wheatley.

Past Hon. Secretary—S. C. Holms, Esq., L.D.S.

THIS Society was founded in 1895, from whence its activities have come to occupy a most important part of the student life of the hospital.

The meetings of the Society held throughout the session are well attended, the President taking the chair. Most of the papers read to the Society are by students, and concern subjects of importance in the practice of dental surgery. In the following discussion many members take the opportunity of expressing appreciation or criticism, and of introducing controversy.

The papers read during the year 1929-1930 were :—

(1) "Ethics," a Presidential address by Mr. F. N. Doubleday.

(2) "The Minimisation of Errors in Gold Inlays," by Mr. A. R. Thompson.

(3) "The Uses and Abuses of Vulcanite Substitutes," by Mr. F. A. Walker.

(4) A Debate with King's College Hospital Dental Society—"General Anæsthesia *v.* Local Anæsthesia for Dental Extractions."

(5) "Problems in Orthodontics," by Mr. R. Cutler.

(6) "The Pathology and Treatment of Epithelial Odontomes," by Mr. S. C. Holms.

(7) "The Problem of Stabilisation and Articulation of Dentures," by Dr. Georges Villain.

(8) "Trigeminal Neuralgia," by Mr. S. C. S. Brown.

(9) "The Saliva," by Mr. R. W. F. Brotherton.

(10) "Radium in Connection with Dental Surgery," by Col. C. H. Howkins.

The casual communications brought forward were :—

(1) "The Study of Extracted Teeth," by Mr. D. S. Clogg.

(2) "A Case in the Wards," by Mr. H. O. Lyne.

(3) "Coronary Pulpectomy," by Mr. G. B. Palmer.

(4) "A Case of Missing Teeth," by Mr. F. J. Mardon.

(5) "Bony Exostoses of Both Jaws," by Mr. J. J. Cochrane.

The Annual Dinner last year was held at the Hotel Great Central, when many distinguished guests and 295 members were present. The Dinner for the coming season will be held at the "Trocadero," on February 28th ; further particulars of this event, however, will be published later.

The first meeting of the year will take place in the Physiology Theatre, on October 16th, when Mr. Malleson will address the new men, and Mr. Bunyan will read a paper on "Amalgam Crowns and Synthetic-Faced Amalgams."

R. W. F. B.

Guy's Hospital Chapel

THE Chapel at Guy's certainly does not thrust itself ostentatiously upon the notice of the newcomer, but it exists nevertheless. Those who boldly open the door under the clock in the front square will find it. It is embedded in Matron's House, which flanks it on either side and covers the roof as well. It is square, without an apse, and with galleries round three sides, being technically described, we believe, as a "drawing-room Chapel of the Georgian Period." An impression of a sort of apse, indeed, has been artificially and undesignedly created by the erection of an organ in one corner and a vestry in the other. This has the disadvantage of partially obscuring the design of the Colonnade, which was clearly intended to be a feature of the building. It is possible that these encroachments will be removed in the execution of a scheme of redecoration and improvement which is afoot. The stained glass windows commemorate William Hunt, the founder of the Medical Wards. The mosaics and panels are a memorial to all those who have died in the Medical Service of the Hospital since 1867.

Various others are recalled by brasses in various parts of the Chapel and in the Lobby. The most interesting of these are those of W. E. Gladstone, a Governor for 63 years, Sir Astley Cooper and Sir William Gull. But the best known feature of our little Chapel is the really noteworthy monument to our Founder, Thomas Guy, which faces the altar. Here is Guy in Court dress of the period relieving a suffering man, while in the background is to be seen an actual model of the Quadrangle and Colonnade Steps outside, with porters engaged in stretcher bearing. The inscription on the monument is well worth studying as a good example of the somewhat florid testimonials which characterised such literature in the Eighteenth century, and as a record of certain facts apt to be forgotten.

An extensive crypt contains the Founder's tomb, for the remains of Thomas Guy were translated across the street from their original resting place beneath St. Thomas's, where they lay from 1725 to 1780. Among the other tombs in the crypt are those of William Hunt, Sir Astley Cooper and certain Governors, Surgeons and Physicians of bygone days. Of those who served the Chapel the greatest name is that of Frederick Denison Maurice, Chaplain 1836–46, portraits of whom will be found in the Lobby. A list of the services in the Chapel will also be found there, and the Chaplain is always glad to supply further information. Needless to say, the Chapel and its Services are always open to all members of the Hospital and Schools.

The Student Christian Movement at Guy's

By J. C. Wallis

THE Christian Union is re-entering on another year of its long existence in this hospital. Special meetings are being arranged for this term which are either informal talks or discussions, and we extend a cordial invitation to all Guy's men, especially Freshers.

In these days many think that Religion in any form is extremely stodgy and not to be

assimilated by those who wish to live active lives. The meetings of this Union by their practical and helpful nature will show to those who may be in doubt that the right kind of religion is pleasantly digestable.

The first meeting of the term will be on Thursday, October 9th from 4.45 p.m. to 5.15 p.m., in Room IV of the Medical School, which we hope will be well attended when L. F. Wilkinson, M.A., will give a short talk. The Freshers' meeting will be held on Thursday, October 16th, at 4.30 p.m., in the Medical School Committee Room, when, following tea, Canon F. A. Cocken, of Southwark Cathedral, will give a short talk. Mr. Turner will preside.

Weekly meetings will be held throughout the term, on Thursdays, in Class Room IV, from 4.45-5.15, and at the same time on Fridays in the Chaplain's Room. At the Thursday meetings we hope to have outside speakers, amongst whom are members of the medical profession, of the Army and of the Navy. The meetings on Fridays will be devoted to open discussion on subjects to be arranged.

All these meetings are entirely interdenominational, and you are heartily invited to be present.

Guy's Hospital Clubs' Union

THE formation of the Clubs' Union, by the amalgamation of the various Constituent Institutions, took place in the summer of 1891. The objects of the amalgamation were to further the interests of the clubs and societies existing at the Hospital by their mutual support, and to simplify the collection of subscriptions. By the payment of an annual subscription—see *Clubs' Union Year Book*—to the Clubs' Union, any student of the Hospital can obtain the privilege of membership of the Constituent Institutions.

The Union comprises the following Constituent Institutions: Association Football Club, Athletic Club, Cricket Club, Dental Society, Gazette, Golf Society, Hockey Club, Lawn Tennis Club, Gymnasium, Physical Society, Rifle Association, Rowing Club, Rugby Football Club, Sailing Club, Students' Club and Swimming Club.

On joining the Union a student is entitled to take part in the activities of any of the above Constituent Institutions. The ground of the Clubs' Union is under the control of the Council, is situated close to Honor Oak Park Station on the Southern Railway, Brighton Section, and to Crofton Park Station, on the Southern Railway, South-Eastern Section. It is 9 acres in extent and is the headquarters of the Guy's Football, Cricket, Athletic and Lawn Tennis Clubs. A Fives Court, under the management of the Students' Club, is situated behind the Nurses' Home near the Swimming Bath, and arrangements are made for classes in Boxing, Fencing and Gymnastics in the Pavy Gymnasium. The Rowing Club is affiliated to the London Rowing Club at Putney, and members are entitled to all the advantages of that Club. Meetings of the Debating, Dental and Physical Societies are held from time to time in the College.

The membership subscription of the Union is 5 guineas per annum.

At Honor Oak Park a new stand has been erected to seat 800 people, so that now with the two existing small stands there is seating accommodation for 1,000 people. It is hoped that improvements to the Pavilion will be commenced shortly.

A new Hard Tennis Court has recently been laid down, and this will shortly be thrown open for general use.

As any student can see, these alterations in themselves necessitate an increase in the membership subscription. The Utopian ideal of a new Students' Club may even yet be realised in the future, thus adding another burden to the finances of the Union.

Membership cards are issued entitling the holders to the privileges of membership of each of the Constituent Institutions

New members should consult the Notice Boards in the Colonnade for information as to the activities of the various clubs.

An excellent programme of home matches has been arranged by the Rugby Football Club—*vide* Fixture Cards—and it should be noted that free admission to the ground during matches at Honor Oak Park is granted only to members of the Union on production of their membership cards.

STUDENTS' CLUB

The premises of the Club include the Smoking and Reading Rooms and the Dining Hall in the College.

A good supply of papers and periodicals is now maintained, and it is hoped that all members of the Club will assist the Committee by themselves seeing that the periodicals, etc., are kept in good order. The taking of periodicals out of these cases or the removal of papers from the Reading Room throws a lot of extra work on to the Librarian, and members ought not to expect the Committee

to keep up a constant supply of papers if these are continually removed as soon as they are placed in the Reading Room.

The Library in the Reading Room has also been thoroughly rearranged A new catalogue has been made, and can be inspected at any time.

Notices are posted in the Reading Room stating the regulations of the Library, and students should avail themselves of this opportunity of a good supply of general literature, which for once has no connection whatever with medicine.

Through the Library books may also be obtained from Mudie's Library.

The attention of all members is drawn to Rule 20 of the Clubs' Union :—

"Every member whose subscription is more than one month in arrear shall be suspended from the privileges of membership, and his name shall be posted in the Students' Club. After two months' default, if desirous of resigning his membership, he shall be required to submit his resignation in writing to the Secretary, and shall not be readmitted without the consent of the Council, who shall, if they think fit, impose a fine of 5*s*. upon his readmission."

A list is posted from time to time of members who have failed to comply with the rules in the Students' Club, and the Secretaries of Constituent Institutions are notified that the members named are not entitled to the privileges of the Union until their subscriptions have been paid.

Rugby Football Club

LAST year the Catford Bridge match was drawn 3-3. After only a moderately successful season the side rallied and retained "the Cup." The attendance at the final, was a record and the game was the fastest since the war. This year we have beaten Catford by 16 points to nil. Let us hope this victory is only the first of many and that a real good season is in store for us.

Of the victorious Cup team we have lost three valuable players, T. G. Robinson, last year's captain—right wing three-quarter ; C. D. Malone, a stalwart of the 2nd row ; and Guy Morgan. The loss of last year's Welsh captain is indeed a great disappointment; he had only been "up" for three months of football—we looked forward to at least seven years. We wish him the very best of luck in his new vocation. The rest are all available and keen. Windsor Lewis is captain. He has only been at Guy's for two seasons, but has already shown a very real interest in the club. None could be keener, and his experience for Cambridge and Wales will be a great asset to the team. The Vice-Captain, J. S. Batchelor, is a hard-working forward and should make a worthy successor to Popplewell as leader of the pack.

J. R. F. Popplewell, the veteran of the side, is still with us and playing as well as ever. Behind the scrum there will be keen competition. T. Fichardt is playing again, and with J. F. Giesen and A. G. Edwards should make a dangerous line.

This year most of the better home fixtures come together before Christmas, when the ground should be in really good condition. For this we have to thank last year's secretary, A. R. Clarke.

We meet Bart.'s in the first round of the Cup. Many people interested in Hospital Football feel that we pay a little too much attention to these cup matches. It is essential that we should not take our club matches too lightly. For many years now we have ranked high amongst London clubs, and no amount of "cup lifting" will ever atone for a loss of prestige, and we do lose prestige when club matches are played in a half-hearted spirit.

We would like to welcome all newcomers to Guy's who are in any way interested in the game. There is a list in the Colonnade on which new members should write their names, positions, and club or school last played for. A trial game will be held early in October. It is hoped that everyone who can turn up will be given a game. Personal applications may be made to the Secretaries of the various teams.

Fixture cards will probably be available by the time this goes to print and may be obtained from any of the above.

In conclusion, we would wish every team from the first downwards, not forgetting the Nomads, a successful and enjoyable season 1930-31.

Association Football Club

By C. E. R. Wood

ON October 4th the Association Football Club starts on its 49th Season with high hopes of improving upon the results of last year, and the fixed intention of bringing back to Guy's the Inter-Hospital Cup, an achievement which is long overdue.

Last season's results were somewhat disappointing. We started the season with a good side, which soon got well together, and we had then every reason for being optimistic, but bad luck again dogged our footsteps—Cantor was injured, and then ill, and a season which had started so well ended rather unsatisfactorily. We were knocked out of the Inter-Hospital Cup by the ultimate winners in a game which we should never have lost.

However, A. M. Cantor is once again captain, and under his enthusiastic leadership we should again have a good side, and can only hope for better luck. He will be fortunate in finding all of last year's members still here with the sole exception of D. B. Smallshaw, who is out of his year. A word must here be said in appreciation of all that Smallshaw has done for Guy's Soccer. His keenness and energy, both on the field and off, as secretary and captain, have been untiring. He will be sorely missed and his place hard to fill.

The fixture list includes games at home and away with most of our old rivals, notably the H.A.C., Old Malvernians, Old Reptonians, Old Wellingburians and Old Carthusians. We hope, also, to visit Oxford and Cambridge again this year.

Two experiments are being made this year. First, we have not entered for the University Cup; this step will meet with universal approval, as it is impossible satisfactorily to compete for two cups at the same time, and the University Cup games in which we have played during the last few years have been far from enjoyable. Secondly, an attempt is going to be made this year for the first time to run a 3rd XI. Numerous fixtures have been arranged and we feel sure that under the energetic management of L. Cosin, the experiment will prove to be a success.

The list on the Colonnade notice board for the purpose of attracting new members has already met with some measure of success, but will all those who wish to play soccer add their names, and keep an eye on the board for notice of trials? Only the names of those who intend to play regularly are required, and they are urgently requested to visit the notice board at least once a day, and if their name appears, to tick off at once. The tedious duties of the secretary can in this way be considerably lessened.

For the benefit of new members it should be mentioned that the home ground is at Honor Oak Park, 15 minutes by train from London Bridge Station; cheap return tickets can be obtained from the cashier in the college dining room. Club shirts are supplied by Messrs. Proberts, of 35, Borough High Street.

Hockey Club

THE Annual General Meeting of the Hockey Club was held last May and the following officers were then elected for the coming season :—

Captain—G. N. Carrell; *Vice-Captain*—R. A. Sykes; *Hon. Secretary and Treasurer*—R. O. F. Tilleke. *Committee*—T. F. Todd; W. W. Jones; T. H. Chignell; C. J. Hartley; C. A. Clarke; and R. F. Cope (*Assistant Hon. Secretary* for 2nd XI).

Last season was an unfortunate one for the Club in many respects. Although our home ground at Ealing was a great improvement on the Edgware ground, it was not all that we had hoped it would be, as, after heavy rain it was more like a quagmire than a hockey pitch. The changing accommodation was very unsatisfactory, with the result that for a home match we rarely took the field at full strength. Consequently in the Inter-Hospitals' Cup Tie we were very ragged and did not play as a team.

This season, although retaining the Ealing Cricket Club ground, we have secured the Ealing Baths for changing accommodation, which should be more satisfactory than last season's, although entailing a walk to the ground. However, we are hoping to find a means of conveyance for some of the matches.

For the coming season we have arranged some very good fixtures and to win these there will have to be a vast improvement on last year's play. We should do better this season, having most of last year's eleven again, but much greater keenness is needed if we wish to regain both Senior and Junior Inter-Hospitals' Cups, and we can only do this by keeping well trained and turning out regularly during the season.

New members in particular are invited to join the Club. They can be assured of a hearty welcome and a regular game once or twice a week.

A list will be found on the notice board in the Colonnade, where, it is hoped, all new men who play hockey will place their names.

R. O. F. TILLEKE,
Hon. Sec.

Sailing Club

By D. Erskine,

THE Guy's Club is a branch of the United Hospitals' Sailing Club which owns seven dinghies and a half-decker at Burnham-on-Crouch. During the season numerous races are held for the various cups, and some excellent coursing may be obtained, which is an enjoyable change from the routine of hospital work. The boats are very easy to manage, and a novice can soon become proficient.

During the winter months meetings are occasionally held at which logs are read and matters of nautical interest are discussed.

The Guy's Club Dinner is to be held at the Rendezvous Restaurant, on Wednesday, October 15th, when it is hoped that all members will

make an effort to be present to ensure the success of our first individual meeting of this kind. Any non-member who is interested will be welcomed to the club, and should communicate with the Secretary.

Rowing Club

NEW men who are casting about for a congenial channel along which to direct their energies in the athletic side of Hospital life could not do better than join the Rowing Club, which offers excellent opportunities for the regular exercise so necessary to all students

The Club is affiliated to the London Rowing Club, Putney, and the subscriptions of all members who are keen and attend practices regularly are paid to the L.R.C. by the Club's Union.

Regular rowing practice goes on throughout the winter on Wednesday and Saturday afternoons, and various new fixtures are being arranged for the coming season. The Hospital crew will again enter for the Head of the River race over the famous University course. Up to the present Guy's has been the only hospital crew in this race which last year attracted as many as 80 " eights." The chief event of the rowing season, however, is still the Inter-Hospital Regatta in May, which is very keenly contested by crews from Guy's, St. Bart.'s, London and St. Thomas's. The preliminary training for these events is, no less than the actual race, a fine experience—not easily forgotten.

As many of the active members have recently qualified, there are vacancies in the Hospital VIII and IV. These may be filled by new men who have rowed before, either at school or 'Varsity. We also extend a hearty welcome to those desirous of initiation into the mysteries of rowing.

Further information may be obtained from the Hon. Sec., W. J. Wheatly, or from any member of the Club. A list for intending members to sign appears on The Rowing Club notice board in the Colonnade, and a meeting of the Club will be announced later.

Swimming Club

by J. Howell

THE Swimming Season this year was not the success it might have been, but if the gaining of the Water Polo Cup depended on keenness rather than skill we should have been easy winners. C. D. Malone, last year's captain, having left, R. W. Stephenson and C. E. M. de Gruchy were elected captain and vice-captain with J. Howell as Secretary. Of the Club matches played, only one, against Hounslow, was won. Of the Inter-Hospital matches, victories were gained over U.C.H. and London, thus putting Guy's in the final. At the Bath Club we were beaten by Bart.'s, but the game was more even than the score 9-3 would suggest. In the Inter-Hospital Swimming Events, J. Howell was second in the 50 yards, C. E. M. de Gruchy second in the 100 yards, while F. H. Weston won the Diving Cup. In the Relay, Guy's came in about 10 yards ahead of Bart.'s, but were disqualified for starting too soon.

The Water Polo season proper is now over, but we have several galas to be played off and, as the same team will be up next year, it is to be hoped that the Swimming Club will again bring back the Water Polo and Swimming Cups which had previously been in our possession so long.

Officers Training Corps

by B. C. Scholefield, Esq., F.R.C.S.

FOR many years now Guy's have provided a keen and strong contingent in the University of London O.T.C. Our present strength is three officers and 92 cadets, or almost double the number from any other hospital. As a result we are able to form an independent company in the Medical unit, the other three companies of which are recruited from seven different hospitals. This is a very great advantage to us, and in order not to lose it, we hope to see many recruits coming forward this year to replace the men who are leaving.

The U.L.O.T.C. comprises an Infantry Battalion, Artillery, Survey, Engineering and Medical Units. The last named, to which we belong, is under the command of Col. Mitchiner, of St. Thomas's Hospital, and parades as a Field Ambulance with full equipment and four companies, of which Guy's form No. 2. The headquarters of the O.T.C. are at 42, Russell Square, but all training during term time is done at Guy's, and consists of a weekly lecture on Fridays at 5 p.m., in class-room I of the Medical School. Mufti is worn for these. Recruits are expected to attend half of these if possible. The training aims at preparing men for Commissions in the R.A.M.C. (either Regular, Territorial or Reserve) and includes many subjects of general interest such as sanitation, hygiene, first aid and map reading.

At Whitsun there is a three-day camp, attendance at which is voluntary, but which provides a very pleasant holiday for those who care to go.

The main item, however, in the annual training is the Summer Camp held during the last two weeks of July. The next one will be at Folkestone, and the following year at Eastbourne. All cadets, to be "efficient," must attend this camp for at least ten of the 14 days. Enquiry of any of the 92 cadets at present on the strength will make it clear that no compulsion is necessary, as it is a thoroughly enjoyable affair. Training ends daily at 4 p.m., after which cadets are free. Riding classes are held, and there are usually arrangements for short trips in R.A.F. machines.

As this camp is held after the Medical School closes, there is no difficulty for men in their first two years, such as arises sometimes for men working in the wards. It is therefore important that freshmen should make up their minds to join without delay.

All engagements are for two years in the first instance, and may be renewed annually thereafter. Uniforms and equipment are provided free. Cadets incur no pecuniary liability of any kind unless they fail to attend at the Summer Camp without adequate medical or academic cause, in which case they render themselves liable for the Government capitation grant of £3 12s. 0d.

Full particulars and engagement forms can be obtained from me, or from H. H. Kenshole, in the Dental Department, or N. L. Barber, in the Medical School.

Correspondence

More "Sea Sayings"

To the Editor of the GAZETTE

SIR,—If Dr. French will get a copy of the late Capt. W. B. Whall's book, "The Romance of Navigation" (Sampson Low) he will find there is a chapter almost devoted to the "Sea Sayings" he is interested in. One of the most unexpected of these is mentioned in the chapter, namely the commonly used expression, "the bitter end," which has nothing whatever to do with mastication, but only with the letting out of the utmost length of cable possible in the hope that the anchor will then hold.

Yours, etc.,
FRED. W. HOGARTH.

20, Erving Terrace,
Morecambe.

Glandular Fever

To the Editor of the GAZETTE

AFTER reading Dr. Douthwaite's most interesting lecture on this disease published in the current *Gazette*, I think it may be of sufficient interest to record my experience in the recent epidemic which has just abated.

As Dr. Douthwaite points out, influenza has varying predominating symptoms in different epidemics, so also other infectious diseases, notably measles, and now glandular fever has shown a definite change of fashion this year. In this summer's epidemic, in a girls' school which had about 20 cases, I have had under my care only four cases which I was able to study carefully in their own homes, and although the onset, incubation period, epistaxis, and above all differential blood counts showed them to be undoubted glandular fever, yet the least marked feature was the glandular enlargement. In all my cases they were barely perceptible and only noticed in the posterior triangles, with the exception of one small supraclavicular gland. Axillæ and groins were entirely free, and spleens were never palpated, yet the lymphocytes reached from 45 to 65% and the children were really very ill, so that I was at first anxious about typhoid. In only one of my four cases was there a slight nodular rash for a day or two, but I am told that several others in the school were looked upon as atypical measles.

In one case where the temperature relapsed and caused anxiety, the polymorphs suddenly reasserted their preponderance and the temperature then fell by crisis. This was considered by Dr. Ryle to be due to some secondary invading organism.

Convalescence, though slow, has not appeared to be as prolonged as in previous epidemics where the glands have been more in evidence.

Yours etc.,
F. G. LLOYD.

Guy's Hospital Gazette

(ESTABLISHED 1872)

A Journal of Hospital News, Medicine, Surgery and Dentistry.

Published on Alternate Saturdays. Price 9d.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Editorial and Publishing Office:—THE COUNTING HOUSE, GUY'S HOSPITAL, LONDON, S.E.1.

Annual Subscription, including *Directory of Guy's Men (Medical and Dental)*, **12s. 6d.** Post Free, payable in advance.

Entry of Students, October, 1930

Medical

Name	*Year*	*School.*
Bell, A. L. C.	2nd Year	Sexey's School, Bruton.
Bleaden, F. A.	1st M.B.	County High School, Ilford.
Burgess, G.	1st M.B.	Stonyhurst.
Carmicheal, J. A. G.	2nd Year	Epsom.
Chartikavanij, K.	1st M.B.	Royal Grammar School, Colchester.
Clark, J. V.	2nd Year	Durham School.
Colbert, A. J.	1st M.B.	St. Joseph's College.
Colenbrander, J. C. A. L.	1st M.B.	Manor House School, Clapham.
Davis, E. I.	1st M.B.	Eastbourne College.
de Marigny, J. F. H. D.	Pre-medical	St. Charles' College, Maritzburg.
Elliott, J. E.	1st M.B.	Marlborough.
Fraser, D. L. V.	1st M.B.	Dulwich College.
Freedman, H.	1st M.B.	High School, Willowmore, S. Africa.
Graham-Brown, D.	1st M.B.	High School, Westcliff-on-Sea.
Harris, M. J.	2nd Year	Havard University.
Hughes, O.	Pre-medical	Llanrust County School.
Hunt, B. W.	1st M.B.	Sedbergh.
Jackson, S.	1st M.B.	Collyer's School, Horsham.
Jelly, D. O.	2nd Year	Rugby.
Lake, F. B.	2nd Year	Portsmouth Municipal.
Lee, F. H.	1st M.B.	Bromsgrove.
McLaughlin, C.	1st M.B.	Stonyhurst.
Mackay, J. A.	1st M.B.	Darlinghurst High School, N.S.W.
Reynolds, S. R.	1st M.B.	Westminster.
Roberts, D. B.	1st M.B.	Shrewsbury.
Rosenberg, E.	2nd Year	University of Cape Town.
Rowe, E. B.	1st M.B.	Kent College, Harbledown.
Sayle, E.	1st M.B.	Alleyn's, Dulwich.
Swan, J. F.	1st M.B.	Bradfield College.
Tin, Maung	3rd Year	Government High School, Burma.
Welfare, K. W.	1st M.B.	Haileybury.
Williams, C. W.	3rd Year	Welsh National School of Medicine.
Wright, G. N.	1st M.B.	Brentwood School.
Zorab, W. G.	1st M.B.	Cheltenham.

Dental

Ashdown, D. E.	Pre-medical	Sherbourne.
*Austin-Smith, G. H.	2nd Year	Leys, Cambridge.
Baxter, P. W. G.	2nd B.D.S.	Repton.
Beck, R. A.	1st Year	Haberdasher's Aske's School, Hampstead.
Beken, F. N.	2nd Year	Grammar School, Shoreham.
Bradley-Watson, H.	1st Year	King's, Ely.
Brears, O. B.	1st Year	Bancroft's School, Woodford Green.
Brown, J. M.	1st Year	Bishop's Stortford, College.
*Dunstan, E.	Pre-medical	Friend's School, Saffron Walden.
Gilbert, B. M. A.	1st Year	University College School.
*Gillett, P. F. B.	1st Year	Brighton and Hove Grammar School.
Gorton, A.	2nd Year	The Crypt Grammar School.
Groom, W. H.	1st B.D.S.	Grammar School, Hayle.
Harley, H. R. S.	1st B.D.S.	Highgate.
Hexter, H. G.	1st Year	City of London.
Holdway, D. E.	Pre-medical	Colston's School, Bristol.
Hunt, R. G.	Pre-medical	Mill Hill.
Keith, K. A.	Pre-medical	City of London.
Lamont, G. R.	1st B.D.S.	Merchant Taylors.
Mackay, D. N.	1st B.D.S.	Haileybury.
*Moll, E. L.	1st Year	Herne Bay College.

*Also Medical.

Name	*Year*	*School*
Nelson, E.	1st Year	King Edward VII School, King's Lynn.
Paterson, D. M.	1st B.D.S.	Westminster.
Peatfield, F. H. W.	Pre-medical	St. Nicholas School, Littlehampton.
Pusey, R. F.	1st B.D.S.	Epsom.
Reynolds, C. A.	1st Year	Chatham House School, Ramsgate.
Rhodes, H. P. L.	Pre-medical	Brighton College.
Richmond, A. G.	Pre-medical	Leighton Park School, Reading.
Sleeman, E. W.	Pre-medical	Whitgift.
Smyth, J. F. A.	Pre-medical	Highgate.
Styer, C. A.	Pre-medical	Brighton College.
Swiss, K. G.	1st Year	Probus School, Cornwall.
Turner, J. W.	Pre-medical	Bridport Grammar School.
Wardale, A.	2nd B.D.S.	Beaumont College, Old Windsor.
Weighall, H. C. A.	1st Year	All-Hallows School, Honiton.
Wells, R. S.	Pre-medical	Brighton College.
*Wigginton, D. J.	1st Year	Strand.
Wren, I. C. L.	1st Year	Wrekin College.

*Also Medical.

Hospital Information, etc.

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Appointments

E. A. Collins, M.R.C.S., L.R.C.P., Certifying Surgeon under Factory and Workshop Act for Saxmundham.

J. R. Ratcliffe, M.R.C.S., L.R.C.P., Hon. Assistant Surgeon, Derbyshire Royal Infirmary, and Hon. Surgeon to Derbyshire Hospital for Sick Children.

Change of Address

J. R. Ratcliffe, M.R.C.S., L.R.C.P., 64, Friar Gate, Derby. *Derby* 2372.

J. H. Richmond, M.R.C.S., L.R.C.P., 6, Tettenhall Road, Wolverhampton.

R. E. Rix, L.D.S., R.C.S. (Eng.) M.R.C.S., L.R.C.P., 71, Wimpole Street, W.1. *Welbeck* 7212.

M. Shaw, M.R.C.S., L.R.C.P., 56, Queen Anne Street, W.1. *Welbeck* 3256.

Death

CLARKE—Died on September 12th, 1930 : aged 68 years, at his home, 1186, Laurel Street, Berkeley, Calif., U.S.A., William Frederick Clarke, M.D., B.S., London, M.R.C.S. ; a native of Lincoln, England. Dr. Clarke is survived by his widow, Amy Robertson Clarke, and two daughters, Mary Clarke Burnett and Elizabeth Clarke Tucker. His son, Lieut. Paul Brooks Clarke, was killed in action at Ypres, 1917.

EDS. { P. M. F. B. / P. V. R.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV 18*th October* 1930 *Number* 1102

PASSIM

AS we sat in rapt attention listening to the well-measured phrases which followed one another so smoothly from the mellow tongue of that master of oratory, Lord Moynihan, we found a growing doubt develop in our mind. Lord Moynihan said :

"Each age is a dream that is dying
Or one that is coming to birth,"

and he would have us believe that we were beholding the dying embers of the second era of surgery, an epoch inaugurated by Lister's carbolic spray and brought to perfection by such craftsmen of surgery as Cushing, Crile, Morrison, Lane, and Lord Moynihan himself. He referred to the technical perfection of the few great masters of surgery, and asked us to agree that the art of surgery had reached its limit. Mindful of the title of his address we came to listen to the voice of the prophet, to, perhaps, "a voice crying in the wilderness" to an unimaginative sightless people. Perhaps some of the more brutally practical of us came to hear some plan unfolded of the evolution of team-work, of the creation of the gastrologist, the thoracologist. Some of us came, no doubt, to hear of the nationalisation of medicine, of the closely approaching day when the brains and skill of the physician and surgeon would be put upon the market of nationalised physics and rewarded according to their true worth. Some of us, the more gullible, the more innocent, the more sublimely optimistic, came to receive hints as to how to become great quick and rich quicker. Perhaps, then, some of us were disappointed, some doubtful, for though the words were the inspiration of the orator, the message was the riddle of the oracle. Standing in the Lecture Theatre of one whose whole life has been devoted to the correlation of Physiology and Clinical Medicine and Surgery—though so modest is Professor Pembrey that the orator cannot have known—Lord Moynihan took the physiologist to task for his refusal to recognise the claims of Hominal Physiology, for his perpetual confusion of the wood with the trees. He painted an allegorical tapestry of the Utopian future of a widowed and hence capable, "sensible" and well-established surgery wooed, courted by, and finally wedded to a hard-working bread-winner, the harnessed ancillary science of Hominal Physiology. He visualised the surgical treatment of Raynaud's and Buerger's Diseases, of other sympathetic disorders, the practical application of the work of Gaskell and Langley, of Royle and Hunter, of Adson. With such and other excursions into the pathology of the living would the new era of surgery be inaugurated. The surgery of the stomach, duodenum, appendix, brain, was relegated to "structural" surgeons, while the surgeon of the future would confine himself to disorders of function.

What, then, of the future of surgery for those of us who aspire to bud as surgeons? What course are we to follow, by which star to set our compass? Lord Moynihan would have us conversant with Logic, with Psychology. But in what relation shall we stand with our colleagues of the future? May we, as surgeons, occasionally, when time hangs heavy, or when the market is barren, "plumb" an appendix, "hack" an amputation, "seam" a stomach, or shall we be old-fashioned, crude, "structural"? If so, wherein lies our future?

A LETTER will be found on another page from Dr. John Fawcett urging the serious consideration of the Services as a career, with especial reference to the I.M.S. Colonel Reinhold's address, which we published in a previous number, on the advantages of the I.M.S., has, we hope, at least brought before a few of us a further alternative in the choice of a career, and we have since received communications from Colonel Stott, I.M.S., the Professor of Pathology and Principal of the King George's Medical College, Lucknow, and from the Director-General of A.M.S., pointing out the advantages to be obtained from joining the Services. Colonel Howell, the A.D.G., A.M.S., at the War Office has requested us to make it known that every means of assistance will be put at the disposal of anyone seeking information in regard to the medical services.

THE tragic disaster of the R101 fills us with an ominously fatalistic horror. Whatever may be the lesson to be learnt, it reflects, we cannot help feeling, an uncanny and supernatural warning against the too speedy progress of knowledge. Such a calamity prompts an awe-inspired silence, a sensation of awkward, wordless sympathy, as though we were in the presence of a grief-stricken mother deprived, unreasonably, of her son. Instead we are inflicted with an outburst of cheap and tawdry sensationalism, a talk of "heroes," a work which makes us shudder uncomfortably, a debauchery of Memorial Numbers, of jarringly vivid photographs. How insidiously well-established is journalism that it is so forcibly thrust upon us at such a time!

Medicine in the Immediate Future

An Address at the opening of the Winter Session at Guy's Hospital, October, 1930, by Lord Moynihan of Leeds, K.C.M.G., C.B., M.S., F.R.C.S.

"Each age is a dream that is dying
Or one that is coming to birth."

IN surgery we are approaching the end of one age, and see the opening of another. The present epoch began on August 12th, 1865, when Lister for the first time applied a carbolic acid dressing to a compound fracture. There is no need to recite once again the changes wrought by Lister in the world of biology and in the world of surgery which he created anew. Lister's work regarded biologically was the necessary and inevitable corollary to Darwin's. The enunciation of Darwin's hypothesis was beyond doubt the most important event of the 19th century, and the most fruitful that had ever occurred in the history of biology. Its inherent ideas, though seeming so revolutionary, were already overdue. The biological sciences, overburdened with unassimilated facts, had fallen into a drowsy torpor of repletion, and were ripe for an enlivening stimulus for the "flash of lightning in the darkness," as Huxley said. Yet the hypothesis was incomplete; for the environment known to Darwin in respect of the physical and animal worlds was quite inadequate to bring about the effects he attributed to it. To the physical elements man, by his long subjection to them and his wide adaptability based upon stubborn though silent defence, has become inured; and the known animal world was already in subjection. It was the work of Pasteur and Lister which completed the hypothesis by showing that man's most dreaded enemies were invisible, surrounding him on all sides, and that their number, varieties, and infinite versatility in attack were the most impressive and the most powerful of all agents in his environment. Lister was not so much establishing new methods as asserting a new biological principle of the highest significance.

Lister's work for surgery made the old operations safe; it gave us the opportunity to invent a multitude of new and far more extensive operations; it created hominal research, and it enlarged the scope and increased the practice of animal research. It has therefore enabled us, in pursuit of operative methods for the cure of visceral disease, especially of disease above and below the diaphragm, to observe the condition of organs during life, to study disease in full career rather than at the end of a long and destructive journey, and little by little to discover and describe the symptoms aroused and the signs produced by such disease in earlier and still earlier stages. So far as animal research is concerned, the physiologists with this new weapon have added knowledge of great value in connection with the function of many organs.

In the progress of modern surgery its practitioners have had to rely chiefly upon themselves. I have made the claim, and I have been criticised for so doing, that surgery, in so far as its craft is concerned, has now almost reached its limit. I am unmoved by my critics; and I venture once again

and quite impenitently to assert that the statement is true. The full fruit of Lister's work in relation to surgery has now been gathered. Almost every organ in the body has been made accessible to the surgeon; operations upon those organs can hardly be extended in the future—they are to-day performed with a degree of safety which, in the hands of the few great masters, can be little, if at all, surpassed. So long as the stomach or portions of intestine must be removed for cancer, the gall-bladder attacked for calculous disease, a lobe of the lung excised for neoplasm or for bronchiectasis; the heart itself opened to remove a foreign body, or closed after the infliction of a wound; the brain or spinal cord approached to deal with any of the diseases which attack them, the operations practised can hardly be safer than they already are in the most expert hands to-day. The craft of surgery has in truth nearly reached its limit in respect both of range and of safety. We may find other and safer methods of dealing with disease; we may obtain earlier access to acute or malignant conditions; we may find that the application of radium to organs accessible but irremovable may render unnecessary the mutilations of surgery, but we can surely never hope to see the craft of surgery made much more perfect than it is to-day. We are at the end of a chapter.

What has been the main effort or the gross result of the labours of this last sixty-five years in the field of surgery? Speaking generally, surgeons have been concerned with the recognition of structural changes in visceral disease, and in the invention of operative methods for their removal or relief. The operations practised have been mechanical methods of removing, checking, or circumventing mechanical disabilities. The efforts of surgeons have been triumphantly successful. Indeed, in many instances, with which physicians continually remind us that they are familiar, this very success has proved the direct cause of grave disaster. When gastro-enterostomy, for example, became standardised, and fell within the competence of anyone with trained hands, and when its success was so great that perhaps no other operation ever practised could surpass it as saviour of life and giver of health, then, unhappily, the indications for it became extended, both by physicians and surgeons, to a grossly illegitimate extent. Evil results soon followed, and an operation of the greatest value became discredited. It was not the operation which called for criticism and disparagement, but rather the operator, whose lack of knowledge or discernment dishonoured the cause of surgery. These surgical excesses produced an inevitable reaction. Nothing but a reckless and unjustifiable extension of surgical methods in the treatment of dyspepsia would have allowed, or may condone the recent recrudescence of medical treatment in cases of chronic inveterate gastric or duodenal ulcer for which it is unsuitable, dilatory, and dangerous. The recent report on the methods revived by MacLean at St. Thomas's Hospital will disappoint all who had based strong hopes upon them. The errors of surgical excess are lamentable enough, but the errors of medical excess are more serious. The deaths from hæmorrhage, perforation, or malignancy after the "cure" of peptic ulcer compel us to realise how much more dangerous, how much less trustworthy are the methods of medicine than are those of surgery. It is the redundance of surgery which belittles its triumphs and encourages the fanciful but untenable claims of medicine.

If, then, surgery, as a mere mechanical craft, can go little, if any, further, what is to be our future? In what direction may we expect the new adventures to be launched? Surgery since Lister's day has, as I say, been concerned not only in the rescue or relief of our patients, but in the creation of quite new knowledge, in the refutation of ancient error long accepted upon high authority in research into the inter-relation of visceral diseases, and into questions concerned with their causation. As a therapeutic weapon and as a research weapon it must still continue. It is not difficult, however, to realise that a change in its objective is already apparent. It has been the power by which structural disorders have been overcome by mechanical means, and its strength has been derived from deep foundations in anatomy. It is becoming, and will increasingly prove to be, the agent by which control is gained over disorders of function and its strength will derive from physiology.

The progress of physiology in the last century has been formidable and beneficent. It was born again by fission in the days of Sharpey and his pupils. It drifted away from descriptive anatomy, the science of the structure, ancestry, and variations of man's body. It attracted the eager and inquiring minds not only from within our own profession, but in very notable instances of men who owned no allegiance to medicine. Its growth, both in respect of rapidity and range, was stupendous, almost passing belief. But little by little, very insidiously, its character was changing, and its interest in man becoming more and more remote. I have said of it without any desire to be cruel, for a compassionate heart is my life's handicap, that physiology is no longer entitled to the name it bears. It has made alliances with physics and chemistry, so close, so interwoven that its identity is lost. Its mission, which was to

elucidate the problem of the normal function of man's organs, is less and less considered. Hominal physiology indeed has awakened or sustained an interest in few physiologists whether at home or abroad. It is true that they have been busy in the practice of animal research, but not seldom their work has seemed aloof from human problems, and its results incapable of application to the maladies of men. If we are to profit by the work of the laboratory in the immediate future, physiologists must concern themselves more and more with human afflictions ; and especially with those conditions which approximate so closely to the normal that only expert investigation as to normal conditions is competent to discover or appraise them. If those who now hold the chairs of physiology in our teaching schools cannot be attracted to the study of man, it is time to consider whether we should not now seek to establish chairs in hominal physiology, giving those appointed the right of access not only to hospital beds, but, what would be far more valuable, to the out-patient room where the earlier stages of disease are seen. The truth is that we are all far too much concerned with advanced, or at least firmly established, disease. There are earlier phases of disturbed function which lead up, perhaps very slowly, to those gross conditions which afflict the hospital in-patient, and, indeed, alone justify his admission. The physician or surgeon on the full staff of a hospital is our last line of defence, fighting in the last ditch. At the moment this is right and proper, indeed inevitable ; but are we not as a profession capable of something better than this ? Can we not create an advance guard ? Can we not fight at the outpost rather than, as we so often must, in the very heart of a citadel, the outworks of which have been already captured ? If so, we must create a vast body of new knowledge ; and the only true begetters of this will be the men trained in laboratory work together with the clinician, medical or surgical. What is immediately required is a better knowledge of normal man, and of the "near normal," abnormal man. Physiologists are those best trained to acquire this almost non-existent knowledge ; and a new science of " para-physiology " needs to be brought to our aid. The physiologist must, however, return from his journeys into a far country, and a warmer greeting than that which awaited the prodigal son shall be his. We are grown accustomed to the plaudits which acclaim the work of physiologists in the last half-century. I grudge them nothing ; but I cannot repress a feeling that they might have been much better occupied, that if it has not been in riotous living they have nevertheless in some degree at least wasted their substance. Our affection for them, and our pride in their accomplishments, are, however, inexhaustible ; but we need them at our own, at their own hearthstone. Surgery at least has not done so badly with only meagre help from them, but if, having completed one adventure, we are setting out with far more assured competence, and with equal enthusiasm, upon another, we are confident that no progress, commensurate with our opportunity, can be made unless they guide us, travel with us, and inspire us. This guidance has been lacking where it should have been insistent. After the work of Gaskell and Langley we might at least have expected a hint as to its possibility of helping such conditions as, say, Hirschsprung's disease, or Raynaud's disease, by an attack upon the sympathetic nervous system. The absence of a close affinity between laboratory worker and clinicians here as elsewhere is clear evidence of a lack of vision on the part of both ; and it is the sick who suffer from and bear the burden of our default. The surgeon, indeed, must bring the science of structure and the science of function together after their long separation ; he must create a union where Sharpey and his pupils made a clear division. The work of Royle and Hunter, followed by Wade (of Sydney), Robertson (of Toronto), Adson, and Learmouth, have shown how very diverse maladies are capable of relief by a surgical attack upon the sympathetic nervous system. Much remains to be done, not only in anatomical and physiological research, but in its application to various diseases of man along the lines they have laid down. What part, we may hopefully ask, does the abdominal sympathetic nervous system play in those remaining functional disorders, which formerly so numerous have now been so greatly reduced by successive victories of the surgeon ? What is the significance, in colons removed for dysfunction, of those interesting changes found by Keith in Auerbach's plexus ? Why have the adrenal glands so unexampled a relationship with the sympathetic system ? And so on. In the immediate future surgery will be interested in, and perhaps concern itself with, the sympathetic and parasympathetic nerves in the neck, chest, abdomen, and pelvis ; with intrathoracic diseases ; with ductless glands ; and with questions of immunity. Will the physiologists return home in time to help us ? Their activities have been those of the gymnasium rather than of daily life ; impressive, but often unrelated to useful purpose.

The new outlook of surgery which I have foreshadowed may suggest that a change in the training of the student of medicine is desirable. I think it is. The chief instrument which the student and the practitioner must bring to bear upon the grave problem which will confront them in their professional careers is the mind. Is it not worth

while to train this in some preliminary way in order to increase its efficiency and adaptability? In the old days an examination in Logic and Psychology was held at the completion of one's career at the London University. Why not at the outset rather than at the end? The logical processes of induction and deduction, of observation and experiment, are most necessary elements in everyday work in medicine, yet no instruction in their meaning or usage is at any time vouchsafed. Any physician or surgeon who has taught a few generations of students must admit that very few have any idea at all as to the way in which their minds should be applied to medical problems. The chief business of the student is acquisition. Like Mr. Gradgrind, he is greedy for facts, but is oppressed by their number and their needless and intolerable complexity. He is given information rather than understanding. He does not know how to assimilate the multitude of facts, so different in kind from other facts which he has acquired at school or university. He does not in truth know how his mind works, nor what an excellent instrument it may be made by proper discipline and training. How soon philosophy should be taught I cannot hazard an opinion, but it is so surely the very foundation of all things that the earlier some acquaintance with it is made the better for us all. The life of the student would be made more interesting and the life of the practitioner more fruitful if the study of anatomy could be regarded as a method of mind training no less than a method of acquiring knowledge of man's body, and if physiology were regarded as the earliest and easiest opportunity of training the mind in the methods of experiment, and if the method were practised and exhibited, not in the laboratory only, but in the wards and operation theatres also. In the training of the student we cannot possibly give him all the knowledge he requires; that is a state to which none of us ever attain, but we can make his task easier and his life of more value if we can train him in method, so that he may know what to look for, where to seek it, and how to appraise it; so that he may observe, discriminate, and test. The Medical Research Council which might exert so magisterial and so inspiring an influence upon the progress of medicine—the very purpose surely for which it was founded—is too busy with little things, too aloof from the day-to-day practice of medicine, out of touch with the needs and desires of clinicians. It is hardly credible that in the last Annual Report such questions as these could be asked: "Is there a science of experimental medicine of which the actual material for study is the human patient? Or is scientific work by the physician or surgeon limited to the application in his art of scientific results worked out elsewhere in the laboratory and delivered to him for use?" What is scientific work? It is surely the making of accurate observations, the testing of those observations by all appropriate methods discriminating as far as possible between truth and error, the collection and correlation of such observations, until at last from them a general truth may be formulated. In experimental medicine the observations are made upon "human material," upon patients whose symptoms receive exhaustive enquiry; with infinite patience and with consummate skill the phenomena observed are freed from manifold irrelevancies, incoherencies, and the constantly shifting inaccuracies which the temperament, the mood, or training or the patient mingle with truth. Enquiry, however complete and unassailable, must be repeated until error is at last eliminated. The physical signs of disease are then studied by every available device, including operation. The evidence afforded by ancillary methods of enquiry, by bacteriologist, biochemist, radiologist, are first appraised (a very necessary precaution) and, when acceptable, are ranged with clinical evidences, each separate contribution being given its exact value and placed in right perspective. When this full inquisition has been carried out, the qualities of the disease and their organic cause may be recognised. From ignorance new knowledge has been created. If this is not "scientific research" then words have no meaning. Clinical research of this kind differs from research work in the laboratory only in difficulty in infinite complexity and in the grave responsibilities which attach to it.

The questions I have quoted from the Annual Report of the Medical Research Council suggest that the work of the physician is a mere synthesis of the work of others. It is certainly that, but it is much more. What have laboratory workers done to help us in the recognition of such disease as gastric or duodenal ulcer, infections of the gall-bladder and cholelithiasis, splenic anæmia, hæmolytic jaundice, to mention some of the diseases with which I am very familiar? What could they do when such diseases do not exist apart from man, when only the "actual material for study is the human patient"? If the first edition of Fagge's Text-book of Medicine, the best of all text-books of its time, is searched, the title "duodenal ulcer" will not be found even in the index. The greater part of our new knowledge of visceral disease has been created by clinicians without any help from the laboratory. The laboratory has been used not for the discovery of new knowledge, but for its illustration.

The truth is, and I grieve to say it, that a grave disservice to medicine is suffered by the exaltation

of the work of the laboratory in comparison with that of the wards and theatres. Both are necessary: the one is the corollary of the other. The scientific mind and the scientific method are equally necessary in both. In the Report of the Medical Research Council it is said that most of this research work is conducted in the laboratories of physiology, biochemistry, bacteriology, pathology, and the like, and a "very small part of it has been done by men engaged in clinical work and studying disease as it actually presents itself in human beings." This sort of opinion is only what we might expect from a Council so imperfectly constituted. Of its twelve members, one only, and he the most recent appointment (the very best possible), possesses any adequate knowledge of scientific clinical surgery; one only practises medicine, and his very able mind sways rather to the laboratory than to the wards. The Council, as a body, is little possessed of any power to understand the nature of clinical problems, and appears to display little interest in them. The Report says: "It is important here to draw at once a clear distinction between the work of the physician engaged in practice and the work of a man engaged in the task of advancing knowledge." I beg anyone who reads this sentence to reflect upon it for a moment and then to ask himself how much our knowledge of visceral disease has not only been advanced, but both created and advanced by those engaged in practice, and it is almost true to say by no one else. The suggestion that the physician engaged in practice does not advance or has not advanced knowledge will be read with consternation by all those who have any slightest knowledge of the history of medicine.

The attitude of the Medical Research Council condones, if it does not encourage, that estrangement of physiologists from human problems, for which, of course, it was not primarily responsible. What is now most urgently needed in medicine is a consolidation of the forces attacking the manifold problems of disease. The leadership which the Medical Research Council, newly constituted, might give would be of inestimable advantage. But the Council must either have a larger representation of Clinical Medicine and Surgery or call practitioners to its aid in an advisory capacity. With the knowledge and new vision which clinicians would bring, a recognition of research would be attended by more faithful and more relevant results. At present the Council seems to apply not ungenerously the system of the dole, giving here a little grant, and there a little. Evidence of a controlling, constructive, and unified policy is lacking. I find that many physicians and surgeons engaged in the active practice of our profession read the Annual Report of the Council not only with dissatisfaction, but with regret that so little appears to be known to its compilers as to the position and needs of the practice of medicine in any of its branches. In the future, medicine must march in closer companionship with its most valued allies, of whom there are many. Every individual and collective effort will be needed. At present our efforts are too disparate and disjointed. It is our plain duty to realise that one principle should guide and sustain us all: that we must take council together, each learning what the other is doing, and testing and applying our knowledge, wherever it appears to be relevant.

The Physical Society

A CLINICAL and Pathological Meeting was held on Thursday, 9th October. This was the first meeting of the year, and was remarkable not only for the presence of many distinguished visitors, Sir CHARTERS SYMONDS in the chair, Sir WILLIAM HALE-WHITE, and Mr. MOLLISON, but also for the poorness of the debates and the unconvincing fashion in which most of the cases, with one or two notable exceptions, were presented. It does, indeed, seem a great pity that house officers should depute to their clerks and dressers the task of setting forth a clinical history, especially on such an occasion as this.

After Mr. Northfield had read the minutes of the last meeting, Sir Charters Symonds spoke a few words on the past days of the Society and recalled those times when the discussion was largely upheld by members of the Staff and outside practitioners. He described some X-ray plates of diffuse carcinoma of the pelvis, pointing out the fact that though the bones were permeated by carcinoma, there was no expansion of the cortex. He also passed round the meeting several interesting post-mortem specimens of carcinoma and diverticula of the œsophagus.

Mr. C. F. COSIN described, in an admirable fashion, the case of a young man who, after a normal boyhood, had remained stunted in growth and had developed knock-knee. This was corrected by an osteotomy, but shortly after this he broke the other femur from some trifling violence. When he was in hospital, X-rays of his bones showed extensive decalcification and the presence of numerous cysts. He was also found to have a tumour growing at the upper pole of his thyroid

gland and bilateral renal stones. Mr. Slesinger had been called in and had removed a cystic tumour from the neck, and this tumour appeared to be derived from the region of the parathyroid. Mr. Cosin illustrated his remarks with numerous photographs of the boy and with X-ray pictures of the bones.

The argument raised over this case was very meagre, but Dr. Hampson stimulated the meeting somewhat out of its lethargy by showing a unique section of a malignant parathyroid tumour invading the thyroid gland.

Mr. K. SOPER recounted the history of a man, a heavy drinker, who was admitted to hospital suffering from œdema of the legs, ascites, and numerous teliangectases. The ascites had first been relieved by tapping, and later novasurol had been tried, but had had to be abandoned owing to the onset of hæmaturia.

Sir William Hale-White remarked on the poor prognosis of cases of cirrhosis of the liver in which tapping of the abdomen became imperative, and he wondered whether the hæmaturia could have been due to the novasurol.

Sir Charters Symonds pointed out that hæmorrhage from mucous membranes seemed to be a fairly constant symptom of the disease, and he had several times observed most intractable epistaxsis in people suffering from cirrhosis.

Mr. N. S. PLUMMER showed two cases. The first was a boy of ten years who was admitted with enlarged glands in the posterior triangle of the neck, a palpable spleen, and a mild lymphocytosis. A biopsy of one of the enlarged glands had been performed, and showed an anomalous microscopic picture, which had been explained as early Hodgkins's disease.

In reply to Sir William Hale-White, he replied that lymphatic leukæmia had been considered, but had now been definitely excluded.

Mr. Northfield suggested that the section might equally well be early tuberculosis, and advised a stay in a sanatorium for six months to observe the progress of the gland rather than subject the patient to deep X-ray therapy immediately.

The second case was an elderly woman who complained of cough, of a chronic punched-out ulcer on the thigh, and a red, fluctuant swelling on the dorsum of the foot. Examination of the abdomen revealed a large, unilateral polycystic kidney; X-rays showed an aneurysm of the arch of the aorta. Mr. Plummer pointed out the rarity of aneurysm in women, and also the rarity of unilateral polycystic kidney.

Sir William Hale-White agreed that the saccular type of aneurysm is very rare in women, but he thought that a diffuse expansion of the aorta, such as this woman possessed, was not uncommon.

Mr. D. GEIDT gave a clinical description of a girl who suffered from obesity, and from attacks of sick headache and transient blindness. He agreed with other speakers at the meeting that the blindness could be part of the migraine from which she obviously suffered, but he could see no reason to give ovarian extract, as had been suggested, since the girl was making progress on dried thyroid and pituitary.

Mr. S. WRIGHT invited a diagnosis on a man of 64 with jaundice, diarrhœa, and a palpable liver.

Mr. Northfield, along with most of the speakers, agreed that the liver was malignant, and he quoted a dictum of Dr. Beddard that a liver with knobs felt through the abdominal wall is always malignant. A few more remarks were made by various speakers, but no definite diagnosis was made.

Mr. H. J. B. ATKINS described the case of an elderly man who suffered from a lump in the right side of the abdomen, from pain in the right leg, and from extensive wasting of the right thigh muscles. Various diagnoses had been considered—typhoid, periostitis, psoas abscess, osteoarthritis, secondary growth in the spine, and all had been discarded. A diagnosis of neuritis from focal sepsis had eventually been made. Various speakers commented on the character of the abdominal tumour, which appeared to be very fleeting in its presence; but it was left to Mr. S. Cohen to point out that, in view of an X-ray showing a definite fracture in the neck of the bone, the diagnosis was obvious, and the muscle wasting was only the natural result of the fracture.

Mr. J. MILLER showed a man who complained of huskiness and dysphagia. A diagnosis of syphilitic stenosis had been made, but Mr. Mollison rose and spoke a few words correcting this to one of syphilitic perichondritis.

Mr. Northfield then moved a vote of thanks to Sir Charters Symonds for taking the chair at the meeting, and, after the latter had replied, the meeting was declared closed.

The Muchmennys

By H. J. Leviseur, Esq.

PROLOGUE

ON a very cold evening of February, 1910, a little, half-starved girl of about 17 was admitted to Queen ward, unconscious and suffering from P.P.H. She died half an hour later. She had been picked up on the pavement of one of the alleys in the vicinity of Guy's and carried in by the constable who happened to find her. Nothing about her gave any evidence of her identity, and so far as I remember the body remained unclaimed and was handed over to Hancock to be prepared for use in the dissecting-room.

The C.I.D. were called in, naturally. The missing baby had to be found. It was, and the circumstances of its discovery are here put in the form of a story. I can't quite decide whether to call it a comedy, a romance or a tragedy. I leave the reader to give it a name.

I wrote the story itself in 1911, just after I had got the particulars and verified them. I had meant to send it to the *Gazette* at the time, but decided that the events were still too recent and that the Muchmennys (even though the name was fictitious) might be recognised and so have a certain amount of unwanted publicity accorded them. I put it away so thoroughly that I forgot all about it and it was only recently that I unearthed it from among some old papers that I was sorting with a view to destroying.

The man from whom I got most of the particulars was the Inspector Roberts of the story. I met him at the Rugby Final between Guy's and the London Hospital. We became great friends and he introduced me to the Muchmennys, who told me, in the strictest confidence, what they knew of the history of the bonny little fellow who was just learning to talk, and whom they both obviously adored.

I do not think that there is any fear of either the Muchmennys or Inspector Roberts (also a fictitious name) being recognised after all these years, and I give the story exactly as I wrote it.

THE MYSTERY

The finest points in Muchmenny's configuration were those of his moustache. The rest of him was hardly worth telling about. He was five feet one finger high and merged harmoniously into any background that set off his hirsute adornment.

The only other characteristic which appertained to a sporadic nature about Muchmenny was his tongue, which was quite as sharp as the points of his moustache.

Let us look at the lady to whom he had attached himself in matrimonial disabilities. She was six feet two tall and affected a preference in clothes for a floral hide-all that buttoned under the arm. In further configuration she wore a belt with a bow at the back, size eleven shoes, curl-papers and acromegalic hands. In temperament she was quiet and docile as her husband was overbearing and masterful. Muchmenny's discrepancies in conformation did not in the least affect his authority in the home and he exercised to the full the manly prerogative of command that had been conferred on him at the hour of passing into the state of connubiality.

On the fourteenth anniversary of his wedding day, Muchmenny overslept himself. He forthwith permeated the atmosphere with vituperation directed at his weeping spouse, left his breakfast untouched and rushed out to his place of employment. That evening he called in at the "Ship and Shovel" for a beer. He wasn't feeling too friendly, and it wasn't long before he had words with a brewer's drayman standing alongside him. They had to threw a pail of water over Muchmenny to bring him back to an appreciation of his faculties.

The full moon hung three yards above the horizon. A penurious borough council had shifted on to her silver shoulders the onus of lighting the streets and the giant adumbration of Muchmenny preceded him as he staggered along the home stretch. Shivering as each icy blast scurried up to help him on his way, he lurched up to his own doorway and sat heavily on the step.

Searching in his soggy pockets for his latchkey, a parcel at his side caught his attention. He touched it and it moved. High-wrought to the pitch where a pin becomes a pick-axe, he jumped up with a shout. Just then a light appeared behind the glass panelling of the door, and Mrs. Muchmenny stood there in gigantesque silhouette.

"What's the matter, Jawn," in a deep, gentle voice. "What has kept you so late? Why, what 'ave you been doing to yourself? Good 'eavens, your face is all swollen and you're wet all over! What's the parcel you've brought 'ome?"

She stooped to pick it up and it gave a squeak. Instinct told her at once what it contained. With a little shriek she grabbed it up and carried it into the house. Crying: "Oh, the little darling will freeze!" She unwrapped it on the kitchen table,

disclosing a shrivelled chunk of protein and calcium phosphate that goes by the name of Homo Sapiens. Then she proceeded to bust up connubial felicity by giving orders to her lord and master.

"Get a bottle and some milk," she said, sharply.

"Oh, drown it," he replied, carelessly. "I don't want no brats in this 'ouse. We done well enough without them for fourteen years."

"What!" she shouted. "Your own child! Get out of 'ere."

"It aint."

"Then why did you bring it 'ome?"

"I didn't. 'Oo the 'ell dyer think I am?" he denied, drawing himself up to his full height.

"Then yor tart left it on the doorstep for you," she said, pointing an accusing finger at him. "Go on, do what I told you, you miserable deceiver. I'll talk to you later."

It took a moment for the full portent of this accusation to percolate into his already befuddled senses, and then he slunk out like a sick dog, while Mrs. Muchmenny carefully put the freezing mortal inside her capacious blouse.

He went his errand in a mismaze of indecision. Obedience to his wife had never numbered among his many parts. But the present predicament pointed to an early reorientation of his ideas. She had him in a corner that was hedged on the South with Scepticism, the East with Infidelity, and the North with her own accusing eye. Only the West remained, and the West was dark. Well, well, he'd get the bottle now, but he'd have to get out of it somehow. He'd have to make a plan. She'd never believe him if he told the truth, that was a certainty, so he'd tell her a lie. Any old lie would do so long as it was plausible.

Two hours later we see them sitting in front of the kitchen stove, Muchmenny in pyjamas and a dressing gown, and his wife next to him with the baby, washed and fed, sleeping in her lap.

"No, Lizzie," he was muttering through his bruised lips, "it aint mine. I sees a feller walkin' with it under 'is arm and asks 'im what it is. 'E first tells me ter go ter 'Ell, and then throws it dahn on the pavement and mixes it wiv me. I gives 'im a few and 'e's 'ad enough and runs. I couldn't leave it there ter die so I brings it 'ome. That's gawstruf. You can see fer yerself where 'e 'it me. And after I be'ave like what I takes to be a gentleman, you comes along and accuses me!"

"I'm sorry," says Lizzie, penitently. "My big, brave man. Come and kiss yer own little wifey."

"And termorrer we'll 'and it over to the perlice." he told her.

"Now you can git that out of your 'ead," she replied, grimly. "I'm in the 'abit of keeping what the good Gawd sends me and this is one of 'em."

We'll leave them now to fight out the question of getting rid of the baby and come back to visit them after ten "termorrers."

Mrs. Muchmenny stood at the breakfast table dangling at arms length a wizened, ugly baby in a napkin that reached from its knees to it's armpits.

"'Ere, Jawn," she was saying, "aint 'e too beeootifil fer words? 'Ave you ever seen the like of 'im in yer life? Otchi-wotchi, ootchi-pootchi. Is it den it's mudder's darling?"

Jawn was at the stove frying bacon. His moustachios had lost their points and drooped uncared for. He answered not his spouse, for he had come to the conclusion that mundane persiflage was disenjoyable.

Half an hour later he was on his way to his work. He had not said good-bye to his perennial partner and his collar still carried the smuts of stove polish.

At home his wife was rocking a soap box covered with a quilt, humming a cacophony devoid of tune, but which might have been a lullaby. There was a knock at the front door and she got up reluctantly to answer it, glancing lovingly back at the box as she left the room.

At the door was a stranger.

"I'm Inspector Roberts of the C.I.D., madam," he said, "and I've come to fetch the baby."

"What baby?" she asked, turning pale and trembling.

"Come on, missus," he said, shortly. "You know what I mean. The lady next door reported you for disturbing her nocturnal ruminations with a baby that aint yours. Meanwhile, we got a report from the 'ospital that the lady as was found near 'ere 'as died, and the baby as killed 'er is missing. We puts two and two together. What about it?"

So that's the position, thinks Mrs. Muchmenny. Well it don't matter at all now that she knows there's no mother longing for the child. She don't see why 'er own sweet treasure should be took away from 'er to be put in one of them terrible orphanages. She'll speak very careful so as not to commit 'erself. But she aint going to give 'im up, no fear.

"That's all lies," she said.

"Is that so?" asked the inspector. "And 'Oos yer doctor, may I ask? I'd like to have a word with 'im."

"I didn't 'ave no doctor, nor nurse neither. Only my 'usband was in at the birth. There aint no law to make me 'ave one, is there?"

The inspector shook his head.

"'Ere," he said. "This don't transude *ipso facto* into my susceptibilities. What you want with somebody else's offshoot?"

"It's mine and I'll prove it to yer," she replied without a moment's hesitation. "Come inside and I'll show you 'is birf certificate. You can't git round that, can yer?"

Just then there was an almost inaudible whine from the kitchen, and with: "Excuse me a minute. That's my little darling calling," she lumbered away.

When she returned the inspector was gone.

Later on he reported the matter to his chief.

"Peculiar," said the latter. "It obfuscates my intelligence in several directions. Howsomever, nobody wants it. We'll write it off as an unsolved mystery."

EPILOGUE.

I last saw the Muchmenny's in 1915. The boy was a far finer lad than he had promised to be. Muchmenny was prouder of him than he had ever been of his moustache. He never dreamt of calling in at a pub. on his way home for fear of missing a few minutes of the boy's company while the daylight lasted.

The Radium Department

THE Radium Department at Guy's Hospital is in possession of half a gramme of radium element, loaned by the King Edward's Hospital Fund in January last, made up as follows:

153 needles each containing 0.6 milligrammes;
100 needles each containing 1.33 milligrammes;
48 needles each containing 5.0 milligrammes;
2 cells each containing 25.0 milligrammes.

This radium is kept in a leaden cube in a safe under the supervision of a Radium Sister, and the requisite number of needles may be obtained by any surgeon or gynæcologist on the Staff for the treatment of any suitable case under his care. A receipt for such radium is signed by the surgeon and given to the Radium Sister at the time of implantation.

In order to standardise the records of cases treated with radium, the National Radium Commission has within the last month issued standard "radium national forms," which are to be filled in by the Surgical Registrar attached to the firm, and returned to Sister Radium.

The arrival of these forms was accompanied by a covering letter from the National Radium Commission to the effect that:

"One of the duties laid upon the Commission is 'advancement of knowledge of the best methods of rendering radium therapy,' and an important means to this end is analysis of the results obtained by different observers.

Hospitals recognised as national 'centres' for radium therapy undertake, as one of the conditions of loan of radium, to organise arrangements for ascertaining the histories of patients at intervals after treatment and to complete the forms approved by the Commission.

The value of any deductions drawn from analyses depends largely on the extent to which the material used is comparable and the best method of securing comparability, among a number of separate observers, is the use of similar methods for recording the clinical observations made.

With this object in view the Commission has, in consultation with the Joint Radiological Committee of the Medical Research Council and the British Empire Cancer Campaign and with King Edward's Hospital Fund, approved certain forms for clinical record, copies of which are enclosed.

These forms are numbered I to VI. The first five are for named organs or regions, viz., tongue and mouth, upper air passages, breast, female genital organs and rectum, the sixth being a general form for use in those cases in which the organs affected are other than those named.

Cancer is being treated at different hospitals either by radium, radon, X-rays, or by operation, or by one or more of these methods combined.

Moreover, the technique of radium therapy varies with different medical men. It is obviously most important, therefore, to ascertain, if possible, which of these methods is the best. For the purposes of comparison and decision a large series of cases, the reports on which have been carefully recorded on a uniform system, must be analysed.

Attention is, therefore, drawn to the following requirement of the National Radium Commission, in so far as it relates to the radium loaned by it:

'The form issued by the National Radium Commission must be filled in, so far as may be necessary (see below), for every patient suffering from cancer of the organs under investigation who, whether as an out-patient or in-patient, applies for treatment at, or is referred to, the Radium Centre of the hospital. Thus there will be included all those patients:

1. Receiving the full treatment with radium or radon;

2. Receiving the full treatment with radium or radon combined with operation ;
3. Receiving the full treatment with radium or radon combined with X-rays ;
4. Treated by operation only ;
5. Not receiving the full treatment with radium or radon alone or combined with X-rays or operation ;
6. Unsuitable for treatment.'

For the special purpose of ascertaining the value of radiological treatment of uterine cancer, arrangements have been made by which British gynæcologists will have the opportunity of co-operating in an international investigation initiated by the Radiological Sub-Commission of the League of Nations Health Organization.

The Sub-Commission adopted a series of rules 'with the object of establishing a basis for full and comparable statistics in the radio-therapy of uterine cancer,' and prepared a form the use of which in accordance with the rules mentioned would enable the requisite minimal data to be collected in a manner suitable for analysis and comparison.

As a result of communications between Sir George Buchanan and Dr. Rajchman, the Medical Director of the League, the Health Organisation has now agreed in the case of uterine cancer to issue, for the use of the approved British centres, books of international forms to be completed in individual cases according to the international scheme. These forms will at appropriate intervals be collected and analysed under the authority of the Radiological Sub-Commission of the League of Nations Health Organisation, either collectively for the countries as a whole or, after a preliminary examination and analysis, in each country separately.

The international forms in question are to be bound in book form in such a way that those desirous of keeping copies of the data transmitted to the Radiological Sub-Commission will be able readily to do so."

The State Hospital, Oslo

JUST one hour spent in a hospital may not seem sufficient grounds for writing about it. It is only the thought that it may interest a few people to hear a little about medicine in Norway that has prompted me to record these few impressions of a flying visit.

The State Hospital is not the largest of the Oslo hospitals, but it is representative of them in its construction and equipment. It is a teaching hospital attended by students and post-graduates. Patients are charged a small inclusive fee which works out at about twenty-three shillings a week. Time prevented my seeing more than the Medical Unit. This consists of some 90 beds and has its own laboratories and X-ray plant.

Before being put to bed, acutely ill cases excepted, patients admitted to hospital are placed in the receiving room. This adjoins the wards, and it is here that the routine examination is carried out by the physician on duty. Notes are made of the findings and of any special examinations required. These are carried out by the specialists concerned during the first few days that the patient is in the wards.

The wards vary in size, the largest containing 16 beds and the smallest only two. They are fine rooms with big windows and balconies where patients who are well enough spend as much of their time as possible. There is a pleasing absence of institutional atmosphere. Diabetics have a special ward, otherwise cases are mixed. The diabetic charts are excellent, blood sugar and plasma bicarbonate estimations being carried out daily in all cases. The amount of sugar in the urine is expressed as grams per 100 c.c. The blood sedimentation rate is used a great deal both in diagnosis of organic from functional disease and in prognosis in rheumatic and tubercular conditions. All temperatures are rectal.

The unit has its own laboratories with first-class equipment. The routine laboratory work, including blood sugar estimation, is done by specially trained nurses. The unit has its own auxiliary X-ray plant, used chiefly for chest work. Alimentary X-ray examinations are carried out at the central clinic which serves the hospital. The equipment is of the latest valve rectified type which is perfectly silent in operation.

The whole unit is extremely up to date and efficient ; looking back I can find nothing to criticise. Everything is spotlessly clean and very well looked after. In the laboratories not a bottle is out of place on the shelves nor an odd scrap of paper on the benches. In the kitchens things are exactly the same.

I should like to acknowledge the kindness of Dr. Stub, Chief Assistant in the Medical Unit, who took me round and showed me everything. For any inaccuracies in this short article I apologise in advance, my excuse being the all too short time I was able to spend at this fine hospital.

J. C.

Correspondence

The Indian Medical Service

To the Editor of the GAZETTE

SIR,—The excellent address by Col. Reinhold published in the *Gazette* of August 23rd last, together with the fact that while away on holiday in July I had several discussions on the same subject with two keen officers of the I.M.S., have stimulated me to write this letter. For a long time past I have felt that the staffs of our medical schools have failed somewhat to play their part in drawing the attention of students not only to the advantages from the medical aspect of a great service like the I.M.S., but also to the need for their help in the maintenance of a service essential to the interests of the Empire and to the well-being of the enormous population of India, both European and native, and never more needed than at the present time.

That the I.M.S. is very far from "moribund as a European service" is demonstrated to the full by Col. Reinhold, and confirms the views of the two officers referred to above.

I believe I am correct in stating that a few years ago the Indian Civil Service acquired a bad reputation in the minds of many boys and undergraduates who otherwise might have been candidates for entrance. This prejudice was overcome by the action, among others, of headmasters of schools who also indicated the duty and responsibility laid upon us to preserve a flow of good men for this great service, with the result that the competition is, I gather, as keen again as ever it was. In the same way it behoves us to do all we can to help to bring about an increase in the number of candidates for the I.M.S., not merely because of the splendid opportunities afforded in the pursuit of Medicine to those who are not attracted by general practice or by other branches of our work, but also because it is, equally with the Civil Service, indispensable for the welfare and prosperity of India. There are first-rate men in the service just as there always have been in the past, and we at Guy's are proud to realise that we have capital representatives in it, though not enough of them, for as Col. Reinhold says, the juniors are not at present joining in sufficient numbers to replace the seniors who are retiring. This object can and should be attained if members of the staffs of medical schools all over the country will help to render the needs and value of the service more widely recognised and known.

It would, too, seem a feasible move and worth a further trial for the medical board at the India Office, or whatever other body may be the proper one to deal in the matter, to arrange for a series of addresses like the one delivered at Guy's, in the medical schools in London and elsewhere. Such addresses might, I take it, be given by officers home on leave, or by others connected with the Service and stationed in this country.

Also it would appear a good plan to appoint an officer in the India Office to whom intending candidates could apply for full information and advice, just as we at Guy's have so-called tutors appointed from members of the staff, graduates of Oxford, Cambridge, or London, to advise students from their respective Universities. The name of the officer appointed should be sent regularly to the Dean of each school so that no difficulty would arise in placing prospective candidates in touch with one who could supply the detailed information required.

I am, Sir,

Yours, etc.,

JOHN FAWCETT.

66, Wimpole Street, W.1.

"Books"

To the Editor of the GAZETTE

SIR,—During the course of his studies, and with the publication of so many new books, the student is often on the horns of a dilemma as to which are the most suitable text-books. Naturally he cannot buy all the latest books, and he therefore turns to the library with a view to peruse at leisure the latest works, and to make up his mind which book will suit him best. Quite a few of our leading text-books are written by Guy's men, and it is a great pity to find such famous publications in Anatomy, Medicine, and other subjects not presented to the library as soon as the new editions are out.

Not only would the sale and popularity of those books be increased, if the author really thinks that his publication is good, but the library would be able to increase the number of "much-wanted" editions by spending that money saved on "outside" publications.

Yours, etc.,

"A GUY'S MAN."

Guy's Hospital,

London, S.E.1.

Nursing News

Tennis

THE year 1930 has not been quite such a successful year for the Nurses' Tennis Club as the previous one, 1929.

In the Inter-Hospital *Nursing Times* Cup Competition, the holders (Guy's) won their first and second round against Lewisham and University College respectively, but lost to St. Thomas's in the third round. The match was played on St. Thomas's grass courts, in a high wind and the Cup holders did not appear to advantage, being decisively beaten by their opponents four sets to one.

(The London Hospital eventually met and defeated St. Thomas's in the Final for this Cup.)

The Annual Mixed Tournament was held by invitation of the club members on the hard courts at Honor Oak Park in August, and as usual was much enjoyed. Prizes were presented by Matron and others, and the proceeds given to St. Dunstan's Hostel for the Blind; fifteen couples took part, partners being drawn for. The winners of the two sections were Nurse Roberts and Mr. Day, Sister Johnson and Mr. Sharpe, the latter pair winning in the Final after a good match.

The Fagge Cup Singles competition did not attract as many players as usual, the entries being between twenty and thirty. The Final was played at the Cottage ground on August 20th, the combatants being Nurses Gillham and Payne, the holder, Staff Nurse Johnson, being unable to defend her title as Singles Champion. We were extremely pleased to welcome Mrs. Fagge, who came with Matron to the Cottage, and enjoyed watching, with many Sisters and Nurses, a really good fight for the Cup, it being one of those days when it was pleasanter to watch than to take part in a strenuous game. In all 36 games were played before Nurse Payne succeeded in capturing the last two games from her indefatigable opponent.

Mrs. Fagge presented the Cup to the winner with hearty congratulations, and Nurse Gillham was the recipient of a small consolation prize.

Many friendly matches were played during the season, one of the most amusing and enjoyable being that between the Nursing and the Medical Staff at the Nurses' Cottage.

The teams consisted of Professors Johnston and Gibson, Mr. Eason and Mr. Gibberd versus Nurses Payne and Stokes, Miss Goodell and Sister Johnson.

The Medical Staff were in great form, but were both surprised and delighted to find that they could not show their superiority over the weaker sex on this occasion, their valiant efforts were met by polite but determined resistance, and much to the amusement and satisfaction of the onlookers, the Nursing Staff were declared the winners by four matches to nil.

Tea was dispensed by Matron to teams and visitors, and a very pleasant afternoon brought to an end.

Other matches took place against the Massage Dept. Administrative Staff, Miss James' team, Carshalton and St. George's Hospitals.

Sport

Rugby

Guy's v. Catford Bridge

THE Hospital opened their season with a home fixture against their old neighbours, Catford Bridge, on Saturday, September 20th, and were successful by two placed goals, a penalty goal and a try (16 points) to nil.

Guy's fielded an experimental side, and of the team that represented the Hospital in the Inter-Hospital Cup Final last year, only eight men were included in the team for the opening game.

The Hospital will find it very difficult to fill the places of such stalwarts as Guy Morgan, who has now given up the study of medicine, T. G. Robinson, a former captain and a splendid right wing three-quarter, and C. D. Malone, a tower of strength to former packs. The last two mentioned have now settled down in general practice and it is doubtful whether they will assist the Hospital again.

In addition, other notable absentees were J. E. Giesen who is still away on holiday, R. A. P. Hogbin, who was assisting the Old Pauline's in their opening match on their new ground, and T. Morgan who fractured a collar-bone during the trial games.

The occasion afforded an opportunity for Windsor H. Lewis, the newly elected captain of "trying out" several members of last year's "A" fifteen with a view to building up a side for the ensuing season.

In spite of the heavy rain during the week, the ground was in excellent condition when Guy's kicked off before a fairly strong wind, and immediately pressed to Catford's 25, through

two fine runs by Windsor Lewis. After a short spell of midfield play, Lashmore cleverly dribbled and cross-kicked to Popplewell, but the latter was held up near the goal line. Following a scrum in front of the posts, Catford were penalised and Windsor Lewis placed a penalty goal from an easy position.

This early success stimulated Guy's to great heights and for a time it looked as though our visitors would be over-run. First of all Windsor Lewis made a great solo run to their 25 and should have scored easily, but he preferred to pass to Johnson, who was immediately tackled and brought down within a few yards of the line.

The Hospital were temporarily driven back, but another splendid run by Fichardt, who side-stepped several opponents before giving Thomas the opportunity of registering a clever try near the posts, which O'Shea converted.

This was quickly followed by another try by Lashmore, who, following loose play in Catford's 25, picked up and without opposition touched down behind the posts for O'Shea to add the extra points.

In spite of their success, Guy's were badly beaten for possession in the set scrums and had the visitors any backs of the standard of their halves, the brothers Boty, the Hospital would have had an anxious time. As it turned out, our back division was in splendid form and immediately frustrated any attacks from developing.

Another individual effort by Windsor Lewis nearly led to a further score, but unfortunately Lashmore just failed to gather the pass and an easy opportunity went astray. A round of passing between the three's quickly followed, but in spite of a stout run by Johnson, the movement broke down when a forward pass spoilt a good opening.

With the wind in their favour, and judging by the form shown in the opening half, it was anticipated that Guy's would dominate the remainder of the game, but contrary to expectations, our visitors rallied so well, under the inspiration of their captain, A. Boty, that Guy's were kept on the defensive for several minutes.

Catford had bad luck in not scoring on at least two occasions, but the handling of their outsides was so uncertain that Guy's had little difficulty in keeping their line intact.

Boty was a continual source of danger and Eustace had all his work cut out in keeping him in check.

Guy's eventually returned to the offensive following some judicious kicking to touch, and offside against Catford outside their 25 gave O'Shea another chance to score, but his kick just missed the uprights.

In the closing stages, the pack responded to the call of their leader and heeled the ball clearly to Eustace, who sent it via W. H. Lewis to Fichardt. The latter made a spectacular run before passing to A. J. D. Lewis for the latter to register a try too far out to convert.

Just before the whistle went for no-side, Thomas made a great effort to get through, and with Johnson alongside it looked as though he would score easily, but he slipped and was hauled down five yards from the line.

Guy's—Walter Lewis; A. G. Johnson; I. K. Thomas; T. Fichardt; A. J. D. Lewis; Windsor H. Lewis (Capt.), J. W. Eustace; W. A. E. Watson, J. P. O'Shea, L. I. S. Campbell, J. S. Batchelor, J. R. F. Popplewell, A. R. Clarke, G. F. Lashmore.

Guy's v. Bedford

THE visit of the Hospital to Bedford on Saturday, September 27th, attracted a large attendance, and after a very fine fight, the home side were victorious by a dropped goal, a penalty goal and two tries (13 points) to nil.

The result rather flattered the winners, and although on the run of the play they deserved their success, Guy's literally threw away several good openings through the inability of their wings to accept passes at the critical moment.

With a view to adding weight to the pack, several changes were made in the forwards, Drummond and Robin were brought into the front row, and Robinson into the back row. Hogbin resumed his place in the pack, but I. K. Thomas could not turn out in the three-quarter line and his place was taken by H. J. B. Atkins.

Considering they were up against a much heavier pack, the Guy's forwards gave a very creditable account of themselves, especially in the second half, when they heeled the ball consistently. Unfortunately, Eustace could not get it away owing to the close attentions of the home side's wing forwards who were frequently on the verge of offside.

The marking of the home backs was particularly good and very seldom did they miss a tackle, whereas certain parts of the Guy's defence were at times decidedly weak.

Guy's had the advantage of the wind in the first half, but from the kick off, Bedford immediately made ground to our 25. From a line out Windsor Lewis brought temporary relief with an excellent kick, the ball just rolling into their 25.

However, Brummill intercepted a passing movement by our three's, and running strongly, made ground to well inside the Guy's half before passing

to Morkel. The latter passed inside and the ball was missed, but the forwards rushed the ball over the line and Williams touched down for an unconverted try.

Keeping up the pressure, the Bedford pack again dribbled through, and forced a scrum five yards from the posts which Eustace cleared with a good kick to touch.

Soon afterwards Guy's were penalised for off-side, but the kick failed and Hogbin cleverly found touch when things looked dangerous.

The Hospital then took up the offensive, and several rounds of good passing took place before Windsor Lewis was finally checked on the line.

From the scrum that followed, the ball was sent out to Johnson via Fichardt and the former was thrown into touch near the corner flag. A second or two later Windsor Lewis tried a drop at goal and the ball went out of play.

The kick-off proved disastrous for Guy's, as Morkel obtained possession in his own half and eluded the attentions of A. J. D. Lewis. Travelling down the wing at express speed he passed inside to Williams, who punted forward and scored another unconverted try.

Just before half-time, Guy's missed a great chance to score, when following a cross-kick by Eustace, Johnson over-ran the ball with the goal-line at his mercy.

Following the interval, Guy's set up a sustained attack which for some minutes placed the home defence in a tangle, and it was only some first-class tackling that saved their line from being crossed.

Bedford made a brief excursion to our 25 and their full-back who had followed up, made a splendid attempt to drop a goal.

A great effort by Fichardt nearly met with success, but the home pack made another fine raid, following a high punt by their left wing which W. Lewis misjudged. The ball was dribbled over the line, but although Guy's touched down near the posts, Reed, the home side's fly-half received from the scrum that followed and taking deliberate aim, dropped a perfect goal to give Bedford a lead of ten points.

Midfield play followed, but Hogbin unfortunately got off-side, and from the penalty, Cooke scored from a position near the half-way line.

This reverse did not deter the Hospital in their efforts to score, and for the rest of the game they attacked continuously. Two penalties were awarded them in quick succession, but nothing resulted and several good bouts of passing were wasted in the excitement to score.

Guy's—Walter Lewis ; A. G. Johnson, H. J. B. Atkins, T. Fichardt, A. J. D. Lewis ; Windsor H. Lewis (Capt.), R. J. Eustace ; I. G. Robin, J. P. O'Shea, W. J. Drummond, J. S. Batchelor, J. R. F. Popplewell, R. A. P. Hogbin, P. K. Robinson, G. F. Lashmore.

Guy's v. U.S. Portsmouth

AT Honor Oak Park, on Saturday, October 4th, Guy's entertained the Services from Portsmouth and were defeated by 3 goals (2 dropped) and 2 tries (19 points) to 2 goals (10 points).

The Hospital were compelled to take the field without their captain, Windsor Lewis, Walter Lewis, and G. F. Lashmore. C. W. Outred was given a trial as hooker to the exclusion of O'Shea, and although he worked very hard throughout the game, he appeared a trifle light for the pack. F. H. E. Beckett was brought in in the right wing, but apart from making several promising runs, he appeared to be over anxious and was not too sure with his handling.

The Services thoroughly deserved their victory, and fully avenged the heavy defeat the Hospital inflicted on them in the corresponding match of last year.

They possess a very fine pack and were always ready to profit by the slightest opening afforded them. However, the Guy's forwards performed extremely well, and held their own against a pack which was much heavier.

J. E. Giesen made a welcome reappearance for Guy's, and produced his best form. Ably supported by T. Fichardt, these two were outstanding and were easily the best backs on the field.

The Services started the game with a splendid dash to our 25, and after five minutes' play and following heavy pressure near our line, G. G. J. Fenton, their fly-half, dropped a fine goal from an awkward angle. Within a few minutes Fenton dropped another goal from a position in front of the posts.

These sudden reverses appeared to have a depressing effect on Guy's, and for a time they were practically on the defensive. From a throw-in, just inside our 25, A. C. C. Miers obtained the ball and ran in for an unconverted try. This had the effect of stimulating Guy's and, following some passing movements by the three's, and some effective heeling by our forwards, Thomas sent Giesen away for a great run. When faced by Gosling, their full-back, he gave Fichardt a splendid chance to score a try behind the posts, which Hogbin converted.

Leading by 11 points to 5, the Services resumed the second half with another dash by the forwards, which was easily repulsed. For a time Guy's more than held their own until the Services gained a footing in our 25.

From a scrum near the line, Bone was allowed to steal away on the blind side and register a try in the corner, which J. W. Forrest converted with a great kick.

Within a minute, G. M. Sladen, the former international, was allowed to wriggle his way over for another try, which was not converted. Both these tries came as the result of poor marking and weak tackling.

Before the finish J. E. Giesen, receiving in his own half, made another brilliant run, which enabled T. Fichardt to score a splendid try, and R. A. P. Hogbin had no difficulty in adding the extra points.

Team—T. A. Hale-Monro, A. G. Johnson, J. E. Giesen, T. Fichardt, F. N. E. Beckett, I. K. Thomas, R. J. Eustace, R. J. Drummond, C. W. Outred, I. G. Robin, J. S. Batchelor, P. K. Robinson, J. R. F. Popplewell, J. A. T. Rowlett, R. A. P. Hogbin.

Golf

SEASON 1929–30

THE Golfing Society has been particularly active this season, and met with considerable success in the Inter-Hospital Cup Competition apart from several very good Club matches.

For the first time for several years the Hospital reached the final round of Inter-Hospital Cup only to be defeated by the holders, St. Thomas's, by 8 matches to 4. It is to be hoped that this coming season will bring us further success and enable us to capture the Cup.

A feature of the season was the very successful match between the Staff and Students, in which players of all handicaps participated. The Staff were victorious by a large margin this season. Thanks to Mr. Bromley, this match was played at Sunningdale.

It is to be hoped that this season will see a great increase in the number of members of the Society to support the monthly competitions which are held, and also to strengthen the team.

The Hospital Course is at Sidcup, easily accessible from London Bridge Station (20 minutes), an arrangement existing whereby members of the Society can play for half the usual green fee, *i.e.*, 2/6 per day.

Monthly competitions are held throughout the season as well as special competitions announced at intervals.

A list will be found in the Colonnade for all members desiring to play and anyone wishing to obtain a handicap who does not already hold one should send in three cards to the Hon. Sec., when one will be allotted by the Committee.

Any further information may be obtained on application to the Honorary Secretary.

W. L. M.

Hospital Information, etc.

Pass List

CONJOINT BOARD—R.C.P.Lond. and R.C.S.Eng.
September, 1930

PRE-MEDICAL EXAMINATION

Chemistry, Physics and Elementary Biology

*R. H. C. Ballanff	*C. W. A. Martin
†G. B. Ebbage	†S. E. Osborne
*J. J. Gaterell	*T. D. H. Ridsdale
*R. E. Goodrich	‡E. A. Williams
*O. C. Jenkins	‡A. H. Williams

†Chemistry and Physics. *Physics only.
‡Chemistry and Elementary Biology.

FIRST EXAMINATION

PART I

Anatomy and Physiology

J. A. Brocklebank	†A. Kobylivker
†A. E. Ginn	†E. Pugh-Jones
*W. Hertzog	*S. E. Roberts
K. Hooper	*H. B. Thornton
*T. Ireland	H. A. T. Wells

†Anatomy only. *Physiology only.

PART II

Pharmacy and Materia Medica

H. Edwards	J. Kunovsky
F. H. Hayward	P. H. Lomax
W. Hertzog	G. B. Palmer
L. Kessel	

Papers by Guy's Men

J. V. Blachford. Observations on epilepsy, *Bristol Med.-Chir. Jr.*, xlvii, 169.

S. W. Charles. Environment, heredity and malocclusion, *Dent. Record*, l, 447.

Change of Address

S. I. Abrahams, M.B., B.S., 134, Osmaston Road, Derby. *Derby* 883.

C. S. Neame, L.D.S., R.C.S.Eng., "Rosemont," 48, Palmerston Road, Buckhurst Hill, Essex.

Birth

SLESINGER.—On October 11th, 1930, at 14, Devonshire Place, W.1, to Gladys Eleanor (*née* Trench), wife of E. G. Slesinger, O.B.E., M.S.—a son.

Marriage

WALDIE—HEDLEY—At Yarm Parish Church, on October 2nd, 1930, Richard William Waldie, L.D.S., R.C.S.Eng., eldest son of Mr. and Mrs. W. S. Waldie, of Darlington, County Durham, to Jane, the eldest daughter of Mr. Robert Hedley and the late Mrs. Hedley, of Yarm-on-Tees, Yorkshire.

EDS. { P. M. F. B. / P. V. R.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV 1*st November* 1930 *Number* 1103

PASSIM

ONCE every three months Lord Lister turns in his grave, or at least, if he does not, he would have every excuse for doing so. Once every three months a new and enthusiastic band of Surgical Ward Clerks is let loose on the wards and theatres. For about the first week in every three months, dirty overalls sweep over sterile towels, hot and grubby hands are laid on that holy of holies, the instrument table. For one week the Registrar sets his teeth and, reflecting that, after all, he must work for his liberal salary, explains in simple language the difference between a sebaceous cyst and a dermoid, between carcinoma and sarcoma.

Once every three months another batch of men leaves Guy's to go into practice, carrying with them a great tradition. We have heard of men from other hospitals qualifying and working for many years before they saw a panhysterectomy; at many hospitals no one lower than a full house surgeon ever dresses to an operation; the ward clerks and dressers are imprisoned behind barriers lest they corrupt the wound. This, no doubt, confers upon the patient a slight advantage, but that cannot be said in any way to balance the loss of self-reliance from which the student must, under such circumstances, inevitably suffer. Here after three months' service in a surgical ward, as a ward clerk, the student may be called on to assist at the most delicate operations, and it is rarely, and then only with an apologetic air, that the surgeon asks his houseman to dress to an operation.

Undoubtedly it is due to this system by which the new man is pitchforked into the midst and told to "get on with it," that the Guy's man is what he is. A more dependable and self-reliant type of practitioner is produced, owing to the way in which the student, almost from the very beginning, feels that he has his own work; that if he does not do it, no one else will, and he therefore proceeds to buckle down to it, and does it not so well perhaps as it might be done, but yet as well as he can.

▭

IN those delightful days when we were very young, very innocent and very busy, either in the building of mud pies or carving, with that indefatigable and unproductive industry peculiar to youth, the Sheraton furniture with our new pocket knife, we found the days sped all too quickly, the hours were all too few, and always as bed-time drew near the routine prayer went up for just ten more minutes. Always we met the same answer: "You can finish that to-morrow; remember, Rome was not built in a day." The builders of our new Out-Patient Department seem to have taken up this challenge of their infant days; picture a youthful plumber brooding over the admonishment in his dark bedroom and resolving grimly to himself: "Wait till I am a man, I'll show 'em." And, indeed, the building does seem to have shot up overnight on the ruins of the gloomy tenements of a few months ago. Already the loud and disgruntling noises of the bricklayer and the steam rivetter have given place to the sibilant notes of the glazier, and already a few tentative and forlorn females can be seen passing through the still damp doors and taking tea amid a wilderness of scaffolding.

One cannot help but speculate on what the new building contains, what delights for the choronic bronchitic, what balm for the indolent sore. If ever arthritis is to be conquered, surely its cure must lie between those imposing white walls, and even Back Surgery dressings may be made to heal there in time. But, while the hospital is building, let it not forget its purpose to suffering humanity, and we can safely and from

personal experience say that no one part of humanity ever suffers as that unfortunate creature, the Out-Patient Officer, especially in the Front Surgery on a slack winter's afternoon. Ah, then his lot is unfortunate, for if he wants to keep warm he must sit on a radiator in a draughty corridor, and if he wants to keep warm in company he must sit with the porters in their dingy little lodge, and if he wants to keep cold he sits in a freezing hall, in front of a crowd of critical patients' relatives, and attempts to keep up a light conversation with the nurses. *He has nowhere else to go.* It is all very horrible.

They say that the Surgery is to be reconstructed, that new rooms are to be built for accident cases, for dressings and for the examination of babies; could not one small room be comfortably furnished and set aside for the use of the O.P.O.? He is a dumb and long-suffering animal, but greatly would he appreciate it.

ALREADY the first fogs of winter are bearing down on us; nurses in the wards are seen to be engaged, more and more openly, in making paper flowers, models and what-nots; residents walk about cursing under their breaths at the idea of having to sing in public. In fact, Christmas is, although two months away, still a distinct cloud upon the horizon, and we would remind our readers of the "Help Yourself" journal. At the modest price of half-a-crown this offers one a very readable and amusing magazine, and at the same time the chance of winning anything from a barrel of oysters to a motor-car. The proceeds are devoted to the use of the large general hospitals, and we ask the reader to buy his copy here from the Hospital (they are on sale everywhere—the *Gazette* office, for instance), as by those means a larger share of the takings will come to Guy's.

WE would like to seize this opportunity to congratulate the First Rugby XV. After beating Catford Bridge quite comfortably, they lost the next two games, to Bedford and the United Services. These defeats may well be attributed to the upsets caused in the process of team-building. Last Saturday they gave the Harlequins a very hard game, the halves having a very difficult task facing, as they did, the best club pair in England at the present time.

The XV as a whole should develop into a very good team, in the true sense of the word. The chief weakness now seems to lie in the pack, which, hard as it works, does not seem to have the necessary weight and tires too easily in the second half. The backs should, if they maintain their present standard, develop into the best line since 1922, and provided that the forwards give them enough of the ball, should find no difficulty in winning a great number of games.

We would also like to congratulate Windsor Lewis on being recognised so soon by his country, and we wish him every success to-day.

THERE is a time-honoured saying that the Editor is not responsible for views expressed in his publication. We must plead this apology again; last week we published a letter from an old Guy's man on the presentation of books by their authors to the Wills Library.

It has been pointed out to us, however, that the book is not the property of the author, but of the publisher, and that such a gesture of generosity is quite uncalled for, as the book would, in any case, be acquired by the Library in the ordinary course of events. Books with a limited or unusual interest would, however, always be welcomed, as they very likely would not find their way to the shelves; and we have no doubt that it is to such volumes as this to which the writer of the letter was referring.

WE would like to congratulate the following on their appointments:—

House Surgeons—
To Mr. Steward—Mr. W. J. Ferguson.
To Mr. Rowlands—Mr. J. Croot.

House Physicians—
To Dr. Hurst—Mr. Stewart Harrison.
To Dr Mutch—Mr. J. M. Lees.

Resident Obstetricians—
To Mr. Chapple—Mr. R. A. Nash.
To Mr. Cook and Mr. McNair—Mr. P. M. F. Bishop.

Out-Patient Officers—
Mr. W. J. Cotton.
Mr. R. F. Lomax.
Mr. P. V. Reading.
Mr. E. H. Rink.

Assistant House Surgeons—
To Mr. Hughes—Mr. N. S. Plummer.
To Mr. Davies-Colley—Mr. F. H. Stevenson.
To Mr. Bromley—Mr. O. Ive.
To Mr. Slesinger—Mr. J. M. Robertson.
To Mr. Ogilvie—Mr. T. B. Pitts.

House Physician to the Children's Department—
Mr. B. Southwell.

House Physician in the Dermatological and Neurological Department—
Mr. G. P. B. Whitwell.

The Physical Society

A CLINICAL and Pathological Meeting of the above Society was held in the Massage Department and College Smoking Room on the evening of Thursday, October 23rd, Mr. W. H. Bradbeer being in the Chair. Several very interesting cases were shown, but, although the attendance was good, the discussion lacked the spontaneity and refreshing variety of ideas that were so much in evidence in the later meetings of last year.

The first case was shown by Mr. BLOOM, and was one of lymphangioma on the chest wall of a boy. The diagnosis from the first seemed fairly clear, and a discussion followed on the best form of treatment, the relative merits of radium, deep X-Rays and excision with the knife or cautery being upheld by different members. Mr. Bruce-Pearson pointed out that some form of treatment was essential as malignant changes were likely to supervene.

Mr. MCARDLE showed an interesting case of a man in the thirties with anæmia, gastric symptoms and a small hard tumour situated apparently in the abdominal wall immediately above the umbilicus. Mr. Bloom suggested a retroperitoneal sarcoma with a metastatic deposit in the abdominal wall, but the majority of the members present finally agreed on a diagnosis of carcinoma of the stomach with metastases.

Mr. R. N. C. SMITH showed a neurological case for diagnosis. Mr. Croot attempted to diagnose a cerebral tumour. After some further discussion on manganese poisoning and disseminated sclerosis, a diagnosis of chronic encephalitis was arrived at.

Mr. S. M. COHEN showed a case of epithelioma of the buttock following a sebaceous cyst. The ætiology and treatment were discussed at some length.

Mr. GILL showed a case of jaundice with irregular enlargement of the liver. A diagnosis of secondary neoplastic deposits in the liver was made, and a discussion followed as to the seat of the primary growth. Investigations had all proved negative. Carcinoma of the pancreas, gall-bladder, alimentary canal and prostate were suggested, the concensus of opinion finally being in favour of the pancreas. Mr. Cohen sought advice as to the diagnostic value of pancreatic function tests, but these were not considered of much importance even by the more physiologically-minded of the members present.

Mr. S. SHONE showed a pathological specimen taken from a middle-aged patient who had been admitted for dysphagia. The specimen consisted of a larynx, trachea and part of the œsophagus, and showed an ulcerated condition of the trachea about an inch below the vocal cords, producing an œsophago-tracheal fistula, and also some ulceration of the epiglottis. The vocal cords were not affected. The patient had suffered from lupus of the face, and after some discussion it was agreed that the lesions were tuberculous.

W. J. F.

The Psychological Factor in Dermatology

By H. W. Barber, Esq., M.B., F.R.C.S.

IT might, perhaps, be thought unlikely that psychical influences would play an important rôle in the genesis of diseases of the skin, but I hope to convince you in this lecture to the contrary. If it be borne in mind that the skin is intimately connected with the autonomic nervous system and the associated endocrine glands, such as the adrenals, thyroid and pituitary, and that this endocrine-autonomic system is constantly subject to emotional stimuli, it would appear theoretically probable that psychological disturbances might be reflected in the skin. This is, in fact, the case.

The most banal subjective cutaneous symptom is the sensation of itching—*pruritus*. It is doubtless protective in origin, in that it arouses the reflex movements of rubbing or scratching, which are primarily designed to remove the irritant upon which the pruritus depends: cf. the co-ordinated reflexes of sneezing and coughing. When an external irritant is responsible, these reflex responses may be successful in their purpose, but, when the symptoms depend upon an irritant circulating in the blood stream, they must obviously fail; nevertheless, they may bring temporary subjective relief. A person, for example, with pruritus of internal origin usually obtains considerable amelioration of his itching by satisfying the imperious desire to scratch.

Pruritus, sneezing and rhinorrhœa, coughing, and respiratory distress comparable to asthma, as well as spasmodic contraction of the pilomotor, intestinal, and vesical muscles, are symptoms that may occur in animals suffering from anaphylactic shock, and in human anaphylaxis, *e.g.*, serum sickness; they are also some of the commonest manifestations of chronic allergy or hypersensitiveness as met with in human beings, and are due to irritation of the autonomic nervous system. In animals the symptoms of anaphylaxis vary according to the species, and in human hypersensitiveness one or more may predominate according to the individual affected. Thus, one sensitised person may react to a given antigen by an attack of asthma, another by paroxysmal rhinitis, another by pruritus with or without urticaria, another by intestinal colic with diarrhœa, another by vesical colic with frequent micturition, and so on. Clinically we find that in many hypersensitive subjects not only is an attack of their particular symptom or symptoms provoked by contact with the antigen to which they are sensitised, but it may also result from an emotional disturbance; under the stress of worry or sorrow the asthmatic will develop asthma, the urticarial subject an outbreak of his urticaria, and the pruritic will have a violent exacerbation of itching.

It is this susceptibility to psychical disturbances that makes the treatment of these patients so difficult, because, as a rule, it is a factor over which the physician can exert no control.

In considering the various types of dermatoses, in the genesis of which this psychological factor plays a part, one can attempt to classify them into those in which it is of sole or paramount importance, and those in which it is merely contributory. As examples of the former may be cited *dermatitis artefacta* and *parasitophobia*, and of the latter the allergic group of eruptions above referred to, and conditions, such as alopecia areata and vitiligo, in which involvement of the vegetative nervous system is also apparent.

DERMATITIS ARTEFACTA.

(*Feigned eruptions. Dermatitis autophytica.*)

The term *dermatitis artefacta* is commonly applied to self-inflicted lesions of the skin, produced by physical means or by chemical irritants, in order to elicit sympathy and attention, to avoid unpleasant tasks, or to defraud. The morphological characters of such lesions naturally vary according to the method of their production; thus they may be erythematous, eczematous, urticarial, bullous, purpuric, ulcerous, or even gangrenous. Often, particularly in deliberate malingerers, great ingenuity is exhibited in the means employed; such persons, having discovered that they are sensitive to a certain drug taken internally, or to the local application of some plant or chemical, may take advantage of their idiosyncrasy to obtain exemption from duty, or monetary compensation. Rubbing the skin vigorously with the finger, moistened with saliva, and the application of strong heat or caustics are the methods commonly encountered. The majority of cases of dermatitis artefacta can be classified under one of the following three headings:—

(1) Malingerers. (2) Persons suffering from hysteria or other mental abnormality. (3) Compensation cases.

(1) *Malingerers.*—Cases of pure malingering are relatively uncommon in civilian practice, but were naturally frequently met with in the war. One example will suffice as an illustrative case:—A middle-aged man was sent down from the line to a base hospital with a diagnosis of "septic ulcers." It was obvious at a glance that the "ulcers" were artificially produced. The surface of a recent one, which had appeared since his arrival in hospital, gave a strongly alkaline reaction to litmus, and the use of an alkaline caustic was suspected. The man's kit was searched, and a stick of caustic soda was found in a shaving-soap container. He was court-martialled, and a conviction was obtained.

(2) The great majority of patients with dermatitis artefacta are young girls suffering from hysteria. The motive underlying their self-mutilation is usually a craving for sympathy and attention. Very often a history of a genuine injury, such as a burn, scald, or cut, which "took a long time to heal," can be obtained, and the subsequent artificially produced lesions are naturally supposed by the relations, and even by the medical attendant to be a curious complication of the original trauma, whereas the pity and solicitude evoked by the latter have suggested to the patient the idea of self-inflicted injuries. An investigation of the patient's circumstances and past history will often reveal the why and wherefore of her actions. In one recent case under my observation, kindly seen for me by Dr. Gillespie, it appeared that the patient was the Cinderella of her family. Her sisters had attentive lovers, who took them out to cinemas, and gave them presents, while she was left at home to help her mother.

It is astonishing to what extent some of these hysterical persons will disfigure themselves by self-mutilation, and how they will submit to wholly unnecessary operations, when their lesions are wrongly diagnosed. A masseuse was brought by her mother to a friend of mine—an expert dermatologist—for a chronic ulcer of the thumb.

He recognised at once that the ulcer was an artefact, and admitted her to hospital so that she could be kept under observation. The ulcer was covered by a sealed dressing, and had almost healed, when the mother, obviously influenced by her daughter's repeated requests to be taken home, removed her from hospital. The ulceration, of course, recurred, and my friend heard that the thumb was subsequently amputated by a surgeon, who had made a diagnosis of tuberculosis.

In some cases a mental condition graver than pure hysteria is present :—Shortly after the war a young married woman was brought to me for recurrent ulcers on various parts of the body, which had been diagnosed by a pathologist as blastomycosis. The lesions were clearly artefacts, and I admitted her to a nursing home, and accused her point-blank of self-mutilation. After preliminary indignant denials, she made a full confession. She had originally consulted the doctor, who brought her to me, for a mole on the face, and he advised its destruction with zinc chloride. With this she successfully destroyed the mole, but produced considerable ulceration. By this time she had become enamoured of him, and, in order to provide an excuse for his further visits, she continued to produced fresh lesions with the caustic. A point of interest is that these were chiefly on the lower abdomen, groins and upper parts of the thighs. To me she accused him of having seduced her, and to him she had previously brought the same accusation against the local vicar ! She was unhappily married, and for a while was placed in a mental home. Since that time she has periodically produced further ulcers, has several times attempted suicide, and has lately been certified.

Diagnosis.—It is very seldom that an expert dermatologist is deceived by a feigned eruption. The characters of the lesions, whether deliberately or accidentally produced, differ in some respects from those of natural origin, which they may simulate. *The contours* of the active lesions, or of the stains or scars left by former ones, are usually unlike those of a genuine eruption ; they may be irregular, oblong or rectangular. When caustics have been used, a streak may be seen at the lower end of the lesion, where the irritant has "run." This, when present, is, of course, pathognomonic. Frequently numbers of active and healed lesions, grouped together and of different and unnatural shapes are seen. *The distribution* is usually on parts within easy access of the patient's hands ; in right-handed persons the eruption is commonly on the left side of the body, and vice versa. *The demeanour* of the patient is, as a rule, characteristic, and it is easy to distinguish between the wary, but confidential malingerer, who is apt to protest too much, and the passive, rather plaintive hysterical girl, who allows her mother to do most of the talking. In the hysterical cases the so-called *pharyngeal anæsthesia* is almost constant; that is to say, a spoon, spatula, or the finger may be swept at will round the pharynx without provoking any sensation of choking or desire to cough in the patient. It is untrue to say that this is the result of suggestion by the examiner, as some have maintained, because it is found if the throat be examined in the ordinary way without any remark to the patient or the bystanders. A comparable insensitiveness of the conjunctivæ is often apparent. *The therapeutic test* of artefact lesions is to apply a sealed dressing, *e.g.*, Unna's gelatine paste, to them, which the patient cannot remove without one's knowledge. Under such a dressing the lesions will invariably heal. Both in malingerers and hysterics one can often cause new lesions to arise on a given site by suggestion. In discussing the case with onlookers one says in the patient's hearing that one would expect a fresh outbreak to occur, for example, on the left leg, and, as a rule, when the patient is seen again, the prophecy has been fulfilled.

Treatment.—There is obviously no treatment for the malingerer except to tell him that one is aware of his attempted deception. The great difficulty in dealing with hysterical cases is to convince the patient's relations, and even her medical attendant of the correctness of the diagnosis. Even if she be admitted to hospital, and the nature of the case be explained to the nurses in charge of her, it is possible that she will persuade them that one is wrong. Apart from the application of sealed dressings to active lesions, treatment is, of course, purely psychological. In my opinion, it is advisable to talk to the patient alone, assure her that it is useless to protest her innocence, and attempt to gain her confidence ; then the parents should be informed of the diagnosis, and the probable explanation of the patient's conduct, and should be given directions as to her future treatment. In the majority of cases this method is successful as regards the prevention of further artefacts.

(3) *Compensation Cases.*—Of recent years, since the introduction of the Workmen's Compensation Act, there has arisen a type of patient who may be said to suffer from a "compensation complex." Trades, which involve a risk to employees of occupational dermatitis, provide the dermatologist with numbers of such patients, and, although his sympathies may be to some extent with the victims of these industries, yet he must recognise

the extent to which insurance companies are defrauded by them.

The following is the usual story:—A man develops a dermatitis of the hands and forearms as a result of handling an irritant, such as a dye or lime, and is certified as suffering from occupational dermatitis. From that moment he is obsessed by the fact that he is a victim of his work, he is out to profit from his disability to the utmost, and his whole attention is focussed on his hands and arms. No doubt his attitude is fostered by the misguided sympathy of his friends, and often by the advice of a solicitor, who specialises in such cases. He complains bitterly of the irritation in his skin, and in consequence rubs and scratches, so that a traumatic dermatitis becomes superimposed upon the original one, and lichenification results. Once this state of affairs has arisen, there is no end to it, so long as regular compensation is forthcoming. After some months the case is referred to a consulting dermatologist by the insurance company, but he is as helpless as the man's panel doctor. As O'Donovan has said, the only cure is "golden ointment," and the best advice that can be given to the company is to settle the matter finally by payment of a lump sum. When this is done, recovery follows in an astonisingly short time.

These cases cannot be considered as examples of simple malingering. The underlying psychological state is more complex, and several factors have to be taken into consideration. No doubt, in some instances the man, having discovered that other irritants, such as soda, alkaline soaps, petrol, etc., apart from that responsible for his primary dermatitis, are capable of exciting an eczematous reaction in his skin, deliberately employs them for that purpose, but I believe this to be exceptional. One has to take into account the fact that a man, genuinely desirous of regular employment, may fear that, if he returns to work, his employers will give him a light job, not involving contact with irritants, for a few weeks, and then discharge him. There is also the disastrous effect on the morale, of which most of us are conscious, induced by a period of idleness; the habit of work is soon lost, and not easily regained. Added to this are the traditional attitude of defiance on the part of the employee towards the employer, the ingrained fear of being exploited, and the feeling that the insurance companies are rich, and can therefore pay. Moreover, it must never be forgotten that, as indicated above, once a person's skin has become eczematised from hypersensitiveness to a given irritant, other substances, previously innocuous, may provoke a similar reaction.

The diagnosis of the "compensation complex" is not difficult. Psychologically the cases resemble those with an anxiety neurosis. When seen by a consultant, the patient is naturally on the defensive, and his attitude resembles that of a witness under cross-examination by a hostile counsel. He usually not only exaggerates subjective symptoms referable to his dermatitis, but also attributes to it other general symptoms, such as insomnia, actual pain, loss of power, indigestion, exhaustion, and so on. Nothing is gained by appearing sceptical, or by pooh-poohing his complaints. It is far better to listen sympathetically, and to make a very careful general examination in order if possible to determine (i) whether the original disability was in actual fact an occupational dermatitis, *for many cases are certified wrongly as such*; (ii) whether the eruption present at the time of examination is merely the result of long-continued rubbing and scratching, or whether there is genuine eczematisation, due to the skin having become hypersensitive to irritants other than that originally in question, for in the latter case the continued disability may justly be considered as resulting indirectly from the primary irritant, if this was responsible for the initial tendency to eczematisation; (iii) whether the patient's present condition is the result of an anxiety neurosis, or whether he is deliberately aggravating it for the sake of compensation. As already stated, the majority of cases that come to the expert for an opinion recover only after the matter has been settled by payment of a lump sum.

It will thus be seen how very unsatisfactory is the position with regard to these compensation cases. In the first place, a person may be certified as suffering from occupational dermatitis, when the eruption is entirely unconnected with his work; thus I have known psoriasis, seborrhœic dermatitis, erythema multiforme, lichen planus, and scabies certified as being of occupational origin. The importance of a correct initial diagnosis is therefore obvious. Employees are naturally inclined to attribute every eruption to their work. Secondly, genuine cases should, if possible, be brought under expert and institutional treatment immediately; the longer they are allowed to remain at home, and trusted to carry out treatment themselves, the more hopeless the prognosis becomes.

PARASITOPHOBIA.

This a far more serious mental abnormality than the hysterical state that is responsible for most examples of dermatitis artefacta. In the majority of cases the patient imagines that his or her skin is infested with some variety of

insect, *e.g.*, the acarus scabiei (acarophobia), lice, etc. Much more rarely the supposed parasite is a vegetable fungus or bacterium, but the particular species of animal or vegetable that haunts the distracted minds of these unfortunates is dependent on circumstances. Thus the patient may actually have had scabies, and his horror at what he regards as a disgusting and disgraceful disease may so weigh on his mind, that he is never satisfied that he is cured, and interprets the most trivial itching or other sensation in his skin as a recrudescence of his former malady. Added to this is the constant fear that he is a source of contagion to others. More commonly the idea of parasitic infection arises from hearing or reading of such cases, as is the rule in syphiliphobia. It must be remembered, however, that these phobias are merely symptoms of a mental state that is already abnormal before they are established, and it is a remarkable thing that, in spite of the almost universal lousiness of our troops in France during the war, I do not remember having seen a case of parasitophobia resulting from it, although I met with a few examples of acarophobia that could be ascribed directly or indirectly to the prevalence of scabies at that time.

The conduct and demeanour of these patients is characteristic. They come not for a diagnosis, but for advice (already sought as a rule in vain from many other doctors, of whom a carefully compiled list, with notes of their remarks, is presented) as to how to rid their skin of its parasites. Almost invariably they bring with them a box or bottle containing the " insects " and their " eggs." On inspection these are found to consist of a medly of fragments of wool or cotton from the underclothing, blood-scabs from scratch-marks, exfoliated pieces of horny layer, often resulting from the application of strong antiparasiticides, etc. An attempt to convince them of the true nature of this collection of *debris* is invariably futile. Often, as will be seen from the following illustrative cases, the patients seriously damage their skin by chemical irritants designed to destroy their imaginary parasites.

Some years ago I was consulted by a masseuse for a dermatitis of the hands and arms, obviously caused by some defatting irritant. On questioning her, I discovered that she was employed by a well-known lady doctor to rub her skin with petrol, in order to destroy insects with which she imagined she was infested. I learnt that the lady in question was at the time in active surgical practice, and appeared to be perfectly normal apart from this delusion, but later she had to be admitted to a mental home.

Recently I saw a lady engaged in scientific research, who told me that her skin was infected with a fungus. Unfortunately she had been told (perhaps correctly) that she had epidermophytosis, and from that time she had diligently applied various antiparasiticides, including a strong solution of perchloride of mercury. She was in consequence in a pitiable state. There was a severe eczematous dermatitis of the hands, arms and legs, and over the back and buttocks were large superficial ulcers produced by the perchloride. She brought a bottle containing the usual *debris*, which she minutely described as pieces of mycelium and spores. So obsessed was she, that she told me she could see, as she lay awake at night, the mycelium hanging from the walls and ceiling. No efforts of mine to convince her that she was suffering from a delusion were of any avail, and she left me in a huff, saying that I had wasted her valuable time, and that she would consult someone else who " knew his job."

The prognosis in established parasitophobia is in my experience well-nigh hopeless. Of all the cases I have seen, in only one, a lady, who thought she had pediculosis capitis, was I able to convince the patient that her fears were imaginary. The victims drift from one consultant to another, until finally, as a rule, they are placed in asylums or mental homes. The late Sir Malcolm Morris used to recount how he was once visited by a lady, who undressed completely before him, in order to demonstrate the lice on her skin, and he was unable to persuade her to dress again. Finally in desperation he said, "Madam, I agree with every word you say, but I think it is hardly fair on your part to come here and drop your lice all over my carpet." Whereupon she apologised, and hastily donned her clothing !

THE ALLERGIC GROUP.

In the conditions so far considered the psychological factor is all-important, but in the group of symptoms—they cannot be called diseases—that may conveniently be termed allergic, it is but one of many. Among the cutaneous symptoms of the allergic state may be cited:—urticaria, with its subcutaneous form angeio-neurotic œdema, the prurigo group, including prurigo simplex, acutus or papular urticaria, and certain forms of eczema. A person representing the allergic type in the highest degree is usually an ichthyotic, has had true infantile eczema, which merged into the prurigo of Besnier, and later develops asthma and paroxysmal rhinitis, with occasional violent attacks of urticaria or angeio-neurotic œdema, due, as a rule, to food-sensitiveness. There is at one end of the scale this unfortunate, who at one time

or other manifests almost every form of allergic response, and at the other the person with a single reaction to one specific antigen ; the latter, however, usually shares the various types of reaction with his relatives.

Some of the characteristics of allergic persons may be summarised as follows :—

(1) A hereditary and familial tendency to tissue-sensitisation towards foreign substances—foods, drugs, animal emanations, vegetable matter, *e.g.*, pollens, chemical irritants, etc.

(2) An abnormally severe reaction to acute or chronic infections.

(3) A heightened susceptibility to environment, both climatic and domestic, fatigue, and psychical influences.

On analysing the clinical signs and symptoms presented by these patients, it is clear that they indicate a relative underaction of the sympathetic and its associated accelerator glands—the supra-renals, thyroid and pituitary, with consequent relative overaction of the vagus ; hence the conception of Eppinger and Hess of vagotonia and sympathicotonia. The low blood-pressure, the muscular hypotonus with faulty stance, the sallow, harsh, and often pigmented skin, the pallid mucous membranes, and cold extremities, are all evidence of diminished activity of the sympathetic-accelerator endocrine system, and, as might be expected, there is usually hypoglycæmia. This conception explains why these patients are so adversely affected by infections, fatigue, and psychical disturbances, to all of which influences the endocrine-sympathetic system is so susceptible. It also explains why the treatment *par excellence* for them is a quiet life of routine away from the often adverse influence of home surroundings, and spent entirely out of doors in light clothing with judicious sun-bathing. The exposure of the skin to air and light acts as a potent stimulus to the sympathetic-endocrine system, and under this treatment these patients become transformed. Their allergic symptoms disappear, the skin, which in a considerable proportion of cases is ichthyotic, becomes soft and supple, the muscles develop a normal tone with consequent improvement in the stance, and the nervous apprehension is replaced by a placid, contented frame of mind. Unfortunately a return to home surroundings, which often means to unstable, nagging parents, is usually followed by a relapse.

I need not further emphasise the psychical factor in provoking exacerbations of the various allergic manifestations to which these patients are liable, but will refer briefly to the condition known as *circumscribed prurigo*, or the localised form of neurodermatitis. Although this is common in the type of person just described, it occurs also in others, who do not strictly belong to the allergic group. In circumscribed prurigo there is itching of one or more areas of skin. Common sites are in women the nape of the neck, and the vulva, in men the scotum, and in both sexes the perinæum, limbs and face. In many cases some local predisposing cause is apparent, *e.g.*, an infection, bacterial or mycotic, friction, or pressure, but in others an underlying psychical complex is the predominant factor. One example will serve as an illustration. Some years ago I was consulted by a lady in late middle-age, who for over twenty years had suffered from pruritus vulvæ. Examination revealed a cirumscribed patch of lichenification on the left labium majus, and the pruritus was confined to this area. There was no apparent local cause, infective or otherwise, and I was forced to consider the probability of a purely psychical origin for her symptom. On questioning her this was revealed. As a girl she was brought up strictly by religious and puritanical parents, who were close friends of a middle-aged clergyman, with whom they often spent their holidays. My patient developed a girlish passion for this man, and their companionship was actually encouraged by the unsuspecting parents, with the result that he ultimately seduced her. The relationship continued for some time, until the girl's increasing shame and remorse led to a final break. Another middle-aged man later asked her to marry him, but she persistently refused him, until many years afterwards her first lover died. When eventually she did marry, her husband was practically impotent.

Here there was ample explanation of the long-standing pruritus, which persisted long after sexual desire had left her and she had become resigned ; it was not difficult to convince her that her symptom was entirely psychological in origin. She wrote to me later to say that since her interview with me the pruritus was much less troublesome, but I did not hear whether it ceased entirely.

ALOPECIA AREATA AND VITILIGO.

I cannot here discuss the ætiology of these two closely related conditions, but I think the present tendency is to regard them as associated with some disorder of the autonomic nervous system. Like scleroderma they may occur in a localised and in a generalised form, and all three may have the so-called " band " or pseudo-root distribution ; moreover in the ætiology of them all one or more of the three factors that are known to affect the endocrine-autonomic system—namely, infection, reflex irritation, and psychical trauma—appear to be of paramount importance.

As examples of the probable influence of a psychical factor in alopecia areata and vitiligo, the following instances may be given. A middle-aged lady came to see me in her third attack of alopecia areata. The first attack occurred immediately after the death of her mother, the second after that of her father two years later, and the third after that of her sister. She had nursed them all through long and trying illnesses, and no other cause for her attacks was apparent beyond the exhaustion and sorrow that these successive losses entailed.

In 1924 a married woman came under my care for a generalised vitiligo. She gave a long history of repeated attacks of tonsillitis, and in 1914 she had three patches of alopecia areata. The tonsils were removed in 1916, and shortly afterwards her husband wrote to her from France to say that he had no intention of returning to her. The news produced a serious nervous breakdown, and was followed within a few weeks by the appearance of an extensive vitiligo. In 1923, she had an alveolar abscess, and an acute otitis media; fourteen teeth were extracted for pyorrhœa. In the same year patches of lupus erythematosus appeared on the hands and feet. In this case, we have the association of alopecia areata and vitiligo, the long story of repeated infections, and the dramatic onset of vitiligo after psychical shock. Experiments carried out for me by Professor Pembrey and Dr. Dickinson suggested that the vitiligo was associated with definite sympathetic nerve involvement.

Several cases have been recorded in which alopecia areata followed quickly on some profound shock, such as a severe accident, fright, or sudden grief, and it was apparently so common in this country during the air-raids that some wag suggested the term "alopecia airraida." Gougerot has emphasised the sudden development of vitiligo similarly after a nervous shock or accident.

A Case of Fracture of the Cervical Spine and Hæmatomyelia

By Mr. M. A. Rushton

ON the 28th June, 1930, a youth of twenty years dived into the sea from a step six inches below the water level, believing the depth of the water below him to be sufficient, whereas it was, in fact, two feet. As he sprang his feet slipped back somewhat so that he did so feebly, but, nevertheless, he entered the water head first with arms extended, knees straight, and feet together. His hands struck the bottom and slid along it ploughing up the soft sand, but no other part of his body did so, as far as he can tell. Next, he found himself lying on his back on the surface of the water with his feet towards the steps from which he had dived, his arms by his sides flexed and pronated, and his legs bent at the knees. He could not move his limbs and so sank, but on rising again he was able to raise his right arm and shout, after which he was rescued by his friends. Having rested for nearly an hour, he succeeded in walking with much assistance, and was taken to Margate General Hospital. There* he complained of pain in the shoulders and arms and had a sensation as of a constricting band around the upper part of his chest. He lay with his arms extended, his respiration was abdominal, and his knee-jerks were sluggish. Priapism and retention of urine occurred, the latter lasting for two days and being relieved by catheterisation.

*Information kindly supplied by Mr. W. Hinchcliffe.

Radiograms suggested an injury of the left transverse process of the first thoracic vertebra, but, owing to alterations in the radiographic department, extensive investigation was not possible. When discharged six weeks later, pain in the shoulders and weakness of the left arm were the only remaining symptoms.

When admitted to Guy's Hospital on the 18th August, it was found that there was diminished sensitivity to pin-pricks below a line encircling the thorax above the nipples and crossing the upper part of the scapulæ, on the ulnar side of the arms in front and behind, and on the whole of the anterior and the ulnar half of the posterior surface of the forearm and hands. All areas supplied from the seventh cervical segment and below it were thus affected. Appreciation of temperature was normal. There was great weakness with wasting and flaccidity of the muscles of the left shoulder, arm and hand, most evident in the long flexors and intrinsic muscles. The right arm was similarly affected in a much slighter degree. Of the arm reflexes only the left biceps jerk was present. A lower motor neuron lesion involving the eighth, seventh, sixth, and partly the fifth cervical segments and the first thoracic was, therefore, present. The right upper abdominal reflex was absent, both ankle jerks sluggish, and the right plantar reflex extensor. In other respects the

nervous system was normal. Radiograms showed a fracture of the body of the sixth cervical vertebra in the median sagittal plane with some compression. There was no dislocation or fracture of the articular processes. By reason of the compression, however, the crushed body of the vertebra had come to project backwards into the spinal canal.

At this time there was no pain in the neck and shoulders, and movements were free.

The history of the accident suggests that the fracture was not caused by acute flexion of the neck, for if this had been the case the man would have turned a somersault, and his feet would not have been nearest the steps when he rose to the surface. Further, a dislocation of the fifth or sixth cervical vertebra would have been the probable injury.[1] On the other hand, if the head had struck the bottom and become violently extended by the blow, a thing unlikely since the hands slid along the floor, a fracture of the odontoid process would have been expected, and there would have been sand in the mouth and eyes. There remain two possibilities, since we cannot tell certainly whether the head did strike the bottom and cause momentary loss of consciousness, or not. Either the vertex struck the sand and delivered a sharp blow down the long axis of the spine, an event which might be compatible with this very unusual type of fracture, but which is not so easily reconciled with the sliding of the hands along the bottom; or the fracture was due to a sudden extension and fixation of the head by violent muscular action caused by the realisation of the unexpected shallowness of the water. Whether muscular force alone would be sufficient to crush and tear in two a healthy vertebra might reasonably be doubted, but if it were so some such injury as this might occur, those muscles exerting a downward pull on the posterior tubercles of the transverse processes of the lower, but not seventh, cervical vertebræ snapping the sixth over the intervertebral disc and seventh vertebra, and the other muscles contributing to the crushing and lateral separation of the fragments according to the direction of their pull.

The chief interest of the case lies in the resemblance of the history, symptoms, and signs to those found in hæmatomyelia, a diagnosis which was entertained in this case before the results of radiographic examination were known. Drs. James Collier and W. J. Adie[2] write of hæmatomyelia: "The instantaneous onset of the paralysis, which is so striking a feature where a sudden jerk of the neck, as in diving, coughing, etc., may have been the immediate antecedent, is very suggestive that actual bruising of the cord by the sudden strain is responsible for the lightning-like onset of the paralysis, and that the hæmorrhage is a secondary result of such bruising, for it is difficult to conceive that a hæmorrhage could produce a complete abrogation of the functions of the spinal cord in the space of one second, whereas this might easily result from a slight bruise." Dr. Symonds has expressed a similar view. It is clear that the case here recorded lends support to this conception, since it presents symptoms and signs resembling those of hæmatomyelia together with definite radiographic evidence of vertebral injury sufficient to account for bruising of the spinal cord.

I am indebted to Dr. Symonds and Mr. Worth for assistance in compiling these notes.

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The Wills Library Book List

(Second List)

PRESENTATIONS to the Library have been made by :—

(1.) British Medical Association ..... 2 vols.
(2.) H. L. Eason, Esq. .... 15 vols.
(3.) C. H. Fagge, Esq. .... 16 vols.
(4.) T. B. Layton, Esq. .... 3 vols.
(5.) Medical Research Council ..... 4 vols.
(6.) Prof. M. S. Pembrey .... 1 vol.
(7.) William Welch Memorial Library .... 1 vol.

The following recent books have been added to the Library :—

(*Note.*—The number in brackets after an entry refers to the above list of donors.)

Bailey. Physical signs in clinical surgery, 2nd ed. 1930.
Ballance. Glimpse into the history of the surgery of the brain. 1922. (3.)
Beeston. Conjoint finals. 1930.
B.M.A. Handbook, 1930-31. (1.)
B.M.A. Proposals for a general medical service for the nation. (1.)
Broderick. Dental medicine. 1928.
Brown and Hilton. Physiological principles in treatment, 6th ed. 1930.
Conybeare. Text-book of medicine. 1929.
Dowden. Principle of early active movement in treating fractures of the upper extremity. 1924. (3.)

Eden and Lockyer. Gynæcology, 3rd ed. 1928.
Evans. Recent advances in physiology, 4th ed. 1930.
Findlay. Recent advances in chemotherapy. 1930.
French and Nuthall. Medical laboratory methods and tests, 4th ed. 1926.
Gordon-Taylor. Dramatic in surgery. 1930. (3.)
Gray, ed. Johnston. Anatomy, 24th ed. 1930.
Jameson and Parkinson. Synopsis of hygiene, 3rd ed. 1930.
Medical Research Council :—
145—Child life investigations (Cruickshank). (5.)
146—Antiscurvy vitamin in apples (Bracewell, etc.). (5.)
147—Electro-cardiogram (Craib). (5.)
148—Movements of the eyes in reading (Vernon). (5.)
Modern technique in treatment, vol. 4. 1928.
Montad-Krohn. Clinical examination of the nervous system, 5th ed. 1930.
Osler and Macrae. Principles and practice of medicine, 11th ed. 1930.
Paterson. Sick children. 1930.
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Romanis and Mitchiner. Science and practice of surgery, 3rd ed. 1930.
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Reviews

The Hair. By W. J. O'Donovan, O.B.E., M.D., M.R.C.P. Published by Messrs. J. & A. Churchill. *Price* 12*s.* 6*d.*

THIS book will prove of widespread interest and value. It contains a mass of information not found in the ordinary text-books of dermatology.

The arrangement of the subject matter is not ideal, and the whole book suffers from a lack of continuity which does not tend to make reading easy.

A large part of the book is taken up with a comprehensive review of alopecia areata. Here, however, one would welcome a little more of dogmatism and of the author's own opinions and experience. The chapter on fungus infections is valuable. One feels, however, that much of the space taken up with matters of historical interest only might with advantage be given over to somewhat fuller clinical descriptions.

One cannot agree with some of the author's statements. For instance, lupus erythematous of the scalp may occur as the sole manifestation of this condition.

The book is marred by a number of misprints, which will, no doubt, be absent from the second edition.

Asthma and Its Treatment. By Percy Hall, M.R.C.S., L.R.C.P. Published by Messrs. William Heinemann, Medical Books, Ltd. *Price* 7*s.* 6*d.*

"THIS book is the attempt of a practicing clinician, who has found he can place little reliance on drugs, to show how the 'more modern' natural therapeutic modes can, if used with care and discretion, bring relief to sufferers who otherwise would seem mostly to seek relief in vain." Thus states the cover of this book of 126 pages. The first 42 pages are devoted to causes and symptoms; the remainder to treatment. The author gives a good account of the disease from a clinical point of view. His chief point, however, is to emphasise the value of diathermy and actinotherapy in the treatment of asthma. He mentions the value of eliminating focal sepsis, removing sources of reflex irritation, attention to hygiene, diet, etc., but "actinotherapy alone . . . is sufficient to bring about rapid and striking benefit . . ." The author has relied on clinical experience; "to some extent, undoubtedly, the good results obtained cannot be satisfactorily explained to the ultra-scientific mind, which demands experimental laboratory proof, and in

the absence of which dismisses the clinical claim made as erroneous or coincidental." The author gives 23 case histories, all of which did well under treatment. Possibly the author in the next edition will give us details of the number of cases treated, the number of successes and failures, the controls used, etc. We should also value information on some of the other points raised. He states that actinotherapy brings about general desensitisation (p. 109); in the next edition we hope to be told (*a*) if an egg or fish sensitive asthmatic is able to eat eggs or fish after treatment with light; and (*b*) do the skin tests become negative? It is so important to obtain a method of general desensitisation that it is to be hoped that the author will soon give us this information. The occurrence of urticaria after a few treatments noted by the author and referred to by him as the "delayed reaction" is probably of significance in this connection, and it is possible that the good results obtained are connected with alteration of the tissue proteins as well as with the increase of vitamine D. The book is a stimulating one, and it is hoped that the author's plea for the investigation of his claims will meet with a favourable response. G. H. O.

A Short Practice of Midwifery. By HENRY JELLET. Tenth Edition, 1930. *Price* 18*s.*

THIS book contains the latest treatment used at the Rotunda and all the descriptions are clear and simple. The whole book has a very practical outlook, and throughout advocates common sense and caution.

A longer article on Routine Anæsthesia for Delivery would be welcome at the present time, but, in common with other writers and teachers, the book hedges the question.

Such anachronisms as plugging the vagina and pubiotomy are still recommended.

The article on the uses of forceps is good, and all diagrams and pictures are clear and helpful. The book is easy to read and may readily be praised.

A Short Practice of Gyn œcology (Gellett and Tottenham). Published by Messrs. J. & A. Churchill. Sixth Edition. *Price* 21*s.*

THIS book may be regarded as a companion to the "Short Practice of Gynæcology." It affords a compact and useful mass of information, but the text is a trifle confused, and there is not enough classification to render it useful to any but those who already have acquired a certain amount of knowledge of gynæcology. The illustrations are most excellent, the book is worth buying for these alone. It seems a pity that the verbal matter does not quite reach their standard.

Diseases of the Chest. By W. J. FENTON and L. S. BURRELL. Published by Messrs Jonathan Cape, Ltd. *Price* 15*s.*

THIS book will be gratefully received by those men who, recently qualified, yet admit to an almost complete ignorance of pulmonary disease, and the name of those men is legion. It will, we are sure, fill a long-felt want, telling simply and concisely the essential points in pathology, symptomatology and treatment of the commoner diseases of the lungs. Certainly not a book for the first-year man, but very readable and instructive to those who already have a certain grounding in medicine. It is well written, and there are some admirable X-ray plates to enliven the tedium of the printed page.

Surgical Anatomy. By BEESLY and JOHNSTON. Published by Humphrey Milford. Third Edition, Revised. *Price*

THIS well-known book has been, in this edition, slightly expanded, and a few minor alterations have been made in the text and the illustrations. The book deals fully and clearly with all the usual problems of surgical anatomy and contains, in addition, many interesting points not usually to be found in a book of this size. The illustrations are excellent and the text not less so, and it is a volume which can be safely recommended to the man who is wondering on which book to decide.

Modern Skin Therapy. By H. D. HALDIN-DAVIS, M.D., F.R.C.S., M.R.C.P. The "Modern Treatment" Series. Published by Messrs. Jonathan Cape, Ltd. *Price* 5*s.*

THE author lays no claim to have written a complete treatise upon dermatological therapy. This book should prove of great value to the practitioner desirous of finding a suitable application for some common skin condition. The prescriptions are throughout entirely excellent.

One is disappointed by the author's tendency to minimise the constitutional aspects of dermatology. One cannot agree that in conditions such as eczema of the allergic type, infantile eczema and acne the most important part of the treatment is the local application.

The chapters on lupus, actinotherapy and minor skin surgery are adequate and useful, but in a book of this type the discussion of "protein shock" and non-specific therapy is too inconclusive to prove of much value. The usefulness of the book would be greatly increased by a chapter upon the common, and often intractable, stapylococcal and streptococcal infections of the skin.

Sport

Rugby

Guy's v. Cheltenham.

ON Saturday, October 11th, Cheltenham paid their first visit to Honor Oak Park, and Guy's gained a decisive victory by 2 placed goals, 3 penalty goals, and a try (22 points) to a try (3 points).

Guy's were at full strength, but earlier in the week Cheltenham lost the services of their brilliant centre Gwyn Davies, and this to some extent accounted for the impotency of their three-quarters.

It was a pity that some of the visitors showed such a tendency to get offside, as it cost their side 9 points as the result of penalty kicks, and at the same time it hampered the Guy's outsides from opening the game.

The hospital pack gave a vastly improved display, and although the ball was slow coming out of the scrums, they gave Eustace a number of opportunities to set his backs going. Owing to the close attentions of his vis-a-vis, Eustace could not always get the ball to Lewis so quickly and cleanly as he did last season.

However, Windsor Lewis was in excellent form, and either created openings or paved the way to the success that rewarded the Hospital's efforts.

Both full-backs played a very sound game, and it was pleasing to see Walter Lewis tackling so accurately and kicking with such excellent judgment.

The start was delayed owing to the late arrival of the visitors, but from the kick-off Fichardt found touch with a good kick. Cheltenham then made a dashing raid, which compelled Guy's to touch down. A nice movement initiated by Giesen broke down when Johnson was tackled in possession well inside Cheltenham's 25.

Immediately afterwards Guy's were awarded a penalty, and from a difficult angle Hogbin landed a fine penalty goal. Guy's continued to press, and, following some good touch finding by Popplewell, Giesen and Walter Lewis, Windsor Lewis made a great run to the visitors' line, which was only just cleared. From a scrum that followed, Guy's were given another penalty, which Hogbin again converted.

The play before the interval was very scrappy, and the home backs were given very few opportunities of opening the game.

The second half was a direct contrast, and, with the forwards holding the ascendancy in the scrums, the Guy's backs were given and made full use of the chances afforded them.

A fine round of passing by Fichardt, Johnson, Giesen and Windsor Lewis only broke down when the latter in punting forward enabled Walter to secure a mark.

Our forwards responded by a great dribble to the visitors' 25, and eventually Windsor Lewis by a clever run enabled Giesen to send Johnson over in the corner, Hogbin just failing with the kick from near the touch line.

Further success came to Guy's, when pressing in Cheltenham's 25, the visitors were penalised for offside and Hogbin kicked another goal.

Following mid-field play, Popplewell secured, and finding a gap in the centre, made a glorious run and, outpacing the full-back, scored a brilliant try near the posts, which Hogbin converted.

Guy's were penalised for feet up and Walter missed a good opportunity to score. A moment later Giesen, Windsor Lewis and Fichardt broke away, and the former gave G. F. Lashmore an opportunity to race behind the posts for a good try, which Hogbin converted.

Just before no-side, the visitors' forwards made a great effort and carried the ball over the line for Fry to register their only try.

Midway through the second half, Cheltenham lost the services of Williams, one of their forwards, who was injured.

Team.—W. Lewis, A. G. Johnson, J. E. Giesen, T. Fichardt, F. N. E. Beckett; Windsor H. Lewis (Capt.), R. J. Eustace; J. S. Batchelor, J. P. O'Shea, R. J. Drummond, I. G. Robin, P. K. Robinson, J. R. F. Popplewell, G. F. Lashmore, R. A. P. Hogbin.

Guy's v. Old Millhillians

PLAYING at home for the third Saturday in succession, Guy's gave such a delightful exhibition of accurate passing and well-executed movements that they completely overwhelmed the visitors, and gained an easy victory by 7 goals and 3 tries (44 points) to a goal (5 points).

The Hospital made two changes from the side which was successful against Cheltenham, L. B. Hilton coming into the pack to the exclusion of Drummond, and D. E. Ashdown, a freshman from Sherborne, taking the place of Beckett at right wing three-quarters.

The latter, although built on the light side, created a good impression, and made full use of the opportunities that came his way.

In the set scrums the pack was a little disappointing, but in the loose they were excellent, and followed up every movement with intelligence and zeal.

The backs were in wonderful form and attacked continuously throughout the game. The combination of Windsor Lewis, Giesen and Fichardt was one of the outstanding features of a great display.

It was also pleasing to find Eustace and Johnson back to the standard they set last season.

The former did many clever things throughout the game, and repeatedly opened up the game for his backs, whereas Johnson made several great runs which gained him such a reputation last season.

Guy's attacked from the start, and in the first minute Windsor Lewis nearly dropped a goal, and soon afterwards a movement started by Giesen and, following a great run by Fichardt, the latter, although tackled by two opponents, managed to touch down too far out for Hogbin to convert.

The Old Boys responded with a dashing raid by the forwards, but Windsor Lewis made a great save and found touch with a magnificent kick. Following a penalty kick which Hogbin fielded, Windsor Lewis made a fine opening for Giesen, who in turn sent Johnson away on the wing for a nice run to the visitors' 25. A minute later another brilliant round of passing along the whole three-quarter line ended in Johnson scoring a fine try, which Hogbin converted from a difficult angle. After Johnson had over-run a cross-kick from Ashdown, Windsor Lewis made a glorious run, in which he gave the dummy twice, before crowning a splendid effort with a try, which was not converted.

Guy's were penalised for foot-up, and Cavaghan made a gallant effort to score, but his kick fell a foot short of the cross-bar, and Giesen found touch near midfield.

Soon afterwards, Giesen sent Fichardt away on another dazzling run to register a very fine try behind the posts, to which Hogbin added the goal points.

A dashing raid in which Popplewell was conspicuous again carried play to the O.M.'s 25; Walter Lewis fielded a long punt and at once set the threes in action. The ball travelled out to Ashdown, who, after making a splendid run, sent Fichardt in for another try, which Hogbin converted.

At this stage the backs were playing magnificent football, and the strong running of Giesen and Fichardt proved far too much for the visitors.

It was therefore not surprising to see them add to their score. A movement started by Johnson who ran across to the centre, and a round of passing between Popplewell, W. Lewis, Fichardt and Giesen saw the latter cross in the corner for an unconverted try.

For a few minutes the Old Boys found new life and set up a hot attack in our 25. After Walter Lewis had made a fine save, Colman made a good run, but spoilt it by a forward pass when a score seemed certain.

However, a minute later Meikle atoned for this mistake and, accepting a difficult pass, dashed over the line and touched down near the posts for Cavaghan to kick a fine goal.

Just before half-time both Popplewell and Lashmore made great efforts to get over, and from a scrum near the line a round of passing ended with Ashdown scoring a try, which Hogbin converted.

The Old Boys attacked for a few minutes after the interval, but a hefty kick by Johnson drove them back and Windsor Lewis made a fine run and, when faced by the full-backs, sent Giesen in for a spectacular try near the posts, which O'Shea converted.

A great dribble by Hogbin, Lashmore and Popplewell was saved on the goal-line, and Guy's were penalised when a score seemed certain.

A sudden raid by the visitors' pack looked dangerous, and Walter Lewis did very well by going down at a critical moment.

Good tackling by Eustace saved the Guy's line when Meikle looked a certain scorer, and, after a nice run by Ashdown, Fichardt found touch with an excellent kick.

Following a scrum, the ball was kicked quickly to Eustace, who, darting round the blind side, sent Johnson away on the wing. The latter made a brilliant run and, after handing off two opponents, ran in to score a great try, which O'Shea converted from an easy position.

This was quickly followed by another delightful round of passing, which was started by O'Shea, Popplewell and Lashmore and ended when Giesen was splendidly tackled in the O.M.'s 25. The latter's backs started a round of passing, but Fichardt made a beautiful interception and, after running half the length of the field, scored a try near the posts, which O'Shea converted.

An individual effort by Batchelor nearly let in Fichardt again, and just before no-side Windsor Lewis made a very fine run with Hogbin, but the latter was just a trifle slow for the full-back, who hauled him down on the line.

Team.—Walter Lewis; A. G. Johnson, J. E. Giesen, T. Fichardt, D. E. Ashdown; Windsor H. Lewis (Capt.), R. J. Eustace; J. S. Batchelor, J. P. O'Shea, G. F. Lashmore, I. G. Robin, L. B. Hilton, J. R. F. Popplewell, P. K. Robinson, R. A. P. Hogbin.

Fencing

Guy's v. H.M.S. President.

THE opening match of the season was held on October 13th against the R.N.V.R., London, and resulted in a win for the Hospital in all three weapons. In the foil event Monkhouse, Gorer and Rink fought well, Rink

being the only one to suffer a defeat. The epée event was marked by the return of T. B. Pitts, who has not fought for the Hospital for two years, and who showed that he still retains his dexterity in this weapon. In sabre, Monkhouse and Wright fought with vigour and considerable success, while Irish battled rather wildly and was defeated in two of his fights.

Scores.—*Foil*—Monkhouse, 0 defeats; Gorer, 0 defeats; Rink, 1 defeat. *Epee*—Pitts, 1 defeat; Gorer, 1 defeat; Rink, 2 defeats. *Sabre*—Monkhouse, 1 defeat; Wright, 1 defeat; Irish, 2 defeats.

Guy's v R.N.C. Greenwich

A MATCH was fought at Guy's on October 23rd against the Royal Naval College, Greenwich, and resulted in a win for Guy's in foil and epée and a loss in the sabre event. In foil, Monkhouse and Paterson fought with brilliance and precision, and won all their fights, while Pitts was unfortunate to suffer two defeats. The epée event was remarkable for the performance of Hodgkin, who, when both sides had four wins and our fate trembled in the balance, battled with grim tenacity and a spider-like posture to win the final contest. The chief strength of the Naval team was found to repose in their sabreurs, and Guy's, after some spirited fighting, lost this event by 6 defeats to 3. Paterson fought well and won two fights. Irish fought moderately well and won one, while Wright, who was suffering from a boil on the left arm, sustained three honourable defeats. After the match both teams repaired to the Bridge House Hotel, where they made merry with feasting and good ale.

The Sailing Club Dinner

THE first Dinner of the Guy's Hospital Sailing Club was held at the Rendezvous Restaurant on Wednesday, 15th October, 1930. In the unavoidable absence of the Commodore, Dr. French took the chair and Mr. McNair represented the Vice-Commodores. Speech-making was the order of the evening. Dr. French, proposing the toast of the Guy's Hospital Sailing Club, referred to the encouraging growth of the Club in the last season or two which made possible the first individual dinner. The Sailing Club, he said, was an asset to Guy's that was not yet generally appreciated; it brought men into contact with those from other hospitals on a friendly footing, and for longer periods than any other of the inter-hospital activities. The importance of this better understanding would soon be realised. Dr. French regretted that it had not yet been made a constituent club of the Clubs' Union, but felt it was time that this was done.

Mr. McNair, replying for the vice-commodores, told of his varied experience of the sea, and talked of the Crouch in the days of the old Fambridge Yacht Club.

Dr. French presented the Ogilvie Cup to W. H. Bradbeer, who had won it for the second time. Hospital Burgees for the Ogilvie Cup were presented to :—

Mr. Ogilvie (1927).
W. H. Bradbeer (1928 and 1930).
J. Bunyan (1929).

Notice

LIVERPOOL AND DISTRICT GUY'S RE-UNION DINNER

THE above dinner will take place at the North Western Hotel, Lime Street, Liverpool, on November 5th (Wednesday), at 7.15 for 7.30. Price 10s. 6d., exclusive of wine.

Would those wishing to be present kindly notify me?

HORACE MATHER,
73, RODNEY STREET,
LIVERPOOL.

Hospital Information, etc.

Pass List

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

L.D.S. FIRST PROFESSIONAL EXAMINATION.

September, 1930.

PART I.

Dental Mechanics.

G. W. B. Bateman
L. G. Blackham
F. J. Bloor
J. Bromley
C. K. Brown
H. B. Christian
R. J. Cowling
F. C. Dutton
D. A. Fairfax
A. C. Fuller
R. T. Garner
H. Gibbs
R. W. Gollings
C. B. de V. Green
F. C. Hampson
C. J. Hartley
T. Helmer
J. R. C. Hindle
R. A. Johnson
H. Kanaar
J. F. Paterson
H. P. Rees
B. W. Sage
S. P. Saunders
P. A. Sloane
H. A. Stanger
H. R. Stubbs
R. B. Sumerling
G. L. B. Thurston
H. C. Tippett
A. W. Turner
W. E. Waite
H. C. Walsham
W. E. A. Watson
T. Weiner
H. W. Westoby
K. J. Whitten

PART II.
Dental Metallurgy.

J. Bromley
H. L. P. Coetzer
T. H. Chignell
A. C. Fuller
G. D. Lloyd
L. E. Marshall
H. Milligan
W. E. Nelson
G. J. Parfitt
H. J. Redman
J. A. T. Rowlett
W. G. Scoble
C. V. F. Thomas
B. G. F. Turner

PART IIIa.
Anatomy and Physiology.

H. R. P. Annett
H. A. M. Ching
W. G. C. Dimock
J. Entwistle
A. T. G. Garnett
N. E. Gillham
A. R. Gillies
H. Hack
C. I. Hagger
T. Helmer
J. R. C. Hindle
L. B. Holmes
R. G. V. Houlson
L. E. Marshall
E. H. Musgrove
C. G. Palmer
J. H. Pitman
H. G. Poyton
A. Pryor
D. H. T. M. Robertson-Ritchie
G. J. Rubie
M. H. J. Simpson
J. A. G. Starnes
R. B. Sumerling
J. H. Thompson
S. R. Wallis
I. E. W. Whitling

PART III.
Dental Anatomy Physiology.

H. G. Jokelson.
G. E. Paxon
U. L. W. Whitling
S. Williams

CAMBRIDGE UNIVERSITY.

SECOND EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.

PART III.

Pharmacology and General Pathology.
October, 1930.

W. Lewis
W. H. Lewis

SOCIETY OF APOTHECARIES OF LONDON

PRE-MEDICAL AND PRIMARY EXAMINATIONS.
October, 1930.

Chemistry and Physics.
R. F. P. Piper.

Physiology.
G. A. Bell.

Papers by Guy's Men

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W. J. Cotton. Perinephric abscess with a two years' history. *Clin. J.*, lix, 476.

G. B. Dowling. (1) Urticaria pigmentosa; (2) Ulerythema ophryogenes (Unna), *Proc. R.S.M.*, xxiii, 1637, 1638.

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W. S. Handley. Place of radium in treatment of breast cancer, *Pract.*, cxxv, 453.

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J. W. Mawer. Inaugural presidential address, *Brit. Dent. J.*, li, 1126.

P. N. B. Odgers. Some observations on the development of the ventral pancreas in man, *Jour. Anat.*, lxv, 1.

A. P. Piggot, G. Macdonald and F. W. Gilder. Two cases of acute silicosis with a suggested theory of causation, *Lancet*, 1930, ii, 846.

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R. P. Rowlands. Surgical treatment of obstructive jaundice, *Clin. Jour.*, lix, 481; Hydronephrosis due to kinking of the upper end of the ureter, *B.M.J.*, 1930, ii, 681.

J. A. Ryle. Staphylococcal fever, *Clin. J.*, lix, 493, 511; Thrombo-phlebitis migrans, *Lancet*, 1930, ii, 731.

Appointment

M. Shaw, Honorary Ophthalmic Surgeon to the Western General Infirmary.

G. Dunderdale, M.D., Senior Medical Officer, N'Kana Copper Mine, Northern Rhodesia.

A. S. Erulkar, M.D., Dean of the Faculty of Medicine, University of Bombay.

Change of Address

G. Dunderdale, M.D., N'Kana Mine, via Ndola, Northern Rhodesia.

B. L. Laver, M.S., F.R.C.S., 1, Cheyne Walk, Northampton. *Northampton* 1182. *And* 16, Wimpole Street, W.1. *Langham* 1171.

H. J. Spon, D.P.H., 6, Via Cavour, Ospedaletti, Italy.

Births

MILLES—On October 13th, 1930, at the Liverpool Maternity Hospital, to the wife of R. D. Milles (née Veronica M. Gillespie)—a daughter.

LAVER—On May 17th, 1930, at 1, Cheyne Walk, Northampton, to Mr. and Mrs. B. L. Laver—a daughter.

Death

SAINT—Norman Hunt Saint, L.D.S., of Enfield, Middlesex, husband of Agnes Emilie (née Combe), third son of the late Sir Wakelin Saint, on August 15, 1930, aged 29.

EDS. { P. M. F. B.
P. V. R.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *15th November* 1930 — *Number* 1104

PASSIM

IT is characteristic of the English people that they are easily embarrassed and create every possible opportunity for causing themselves such embarrassment. One should therefore deduce, logically, that they enjoy embarrassment; so far, however, as we can see, the only body of persons clever enough to realise this and turn it to their own profit is the cheaper daily press, who wisely, but in a nauseating manner, stimulate the public, much to its delight, to discomfort and embarrassment both at the breakfast table and, with their evening editions, in the packed homeward-bound Underground.

Perhaps we, by nature of our daily work, have developed, in too clear a perspective, the proper value of sentiment—we who work among sickness and sorrow, death and disappointment. We see so often and, let us hope, can still admire the courage of a desperately ill patient, the patience of a really brave relative, soon to be bereaved, that we must feel all the more acutely, by such comparison, the futility of the stimulation of tawdry sentiment by the daily press.

Let us, however, not lose our sense of values, and let us, when we consider, for instance, the mournful pageantry of the Two-Minutes' Silence, consider it carefully. Is the perpetuation of what was originally a truly great gesture of respect and homage to the fallen in keeping, after this long interval, with the occasion? "Lest we forget" is the reason for the rites of Armistice Day, but who can ever forget of those who experienced the manifold emotions which the Great War brought to birth? and, remembering, who among us does not pay quite as suitable homage as the Two-Minutes' Silence represents? The mere fact of buying a Flanders' Poppy and of seeing everyone else wearing one is sufficient to throw our minds back and make us remember the men who fought and died for our country; the mere presence in our midst of the Cenotaph, the Hospital War Memorial Gateway, the village War Memorial which we pass so constantly, should preserve in our minds the fragrant memories of that band of men who did more than any others of the present century to show the world that Englishmen, when roused by an emergency, can prove themselves true to the real reputation of their country. Should we not therefore begin to think of dispensing with the blare and ostentatious noise of the Two-Minutes' Silence, and forgo the temptation of indulgence in such outward display of sentiment?

WE should like to congratulate most heartily Dr. A. C. Hampson on his appointment as Assistant Physician in the Children's Department and Mr. Grant Massie on his appointment as Assistant Orthopædic Surgeon.

OUR attention has been drawn to a Boxing Tournament to be held in the Bermondsey Town Hall on Friday, December 5th, in aid of the funds of the Bermondsey and Rotherhithe Invalid and Crippled Children's Aid Association. Tickets for the entertainment (reserved seats at 5/9 and 3/6) may be obtained by writing to the Association at the Municipal Buildings, Spa Road, and there are many unreserved cheaper seats in the body of the hall and in the gallery. The prizes

will be presented to the successful competitors by Major John Hay Beith, C.B.E., M.C.

ONCE more the time has come round when half the Resident Staff emerges from the chrysalis of sheltered hospital routine work to go forth as the painted butterfly of General Practice in the outside world, and once again this occasion was celebrated in the traditional manner at the Residents' Going-Off Dinner. Once more were indifferent and, in some cases, incoherent speeches delivered to indifferent and, in most cases, inconsiderate listeners. Let it never be said that an off-going Resident does not take his sorrows gladly.

WE are amazed and gratified to see that the structural activities of the Works' Department in the neighbourhood of the subway have almost ceased, and that this area of ground, which, on searching into the memories of our ward clerk days, we can almost swear was once covered with grass, has been sewn with loose soil, and neatly rolled. Where next shall we see those now almost affectionately familiar ladders and pails? Is it too much to hope that the Works' Department may soon turn their attention to the task of making the differentiation between the hot and cold taps of the wash-basins of the Students' Club possible through the medium of the sense of touch as well as through the sense of sight?

WE feel great sympathy for the reporter from an evening paper who asked for an interview with a certain prominent member of the staff, and got it.

The Treatment of Mental Disease

By Dr. R. D. Gillespie

GENTLEMEN,—This article is concerned mainly with the mental diseases commonly known as the psychoses, *i.e.*, manic-depressive, involutional, melancholic, schizophrenic, paranoic and paranoid, and organic psychoses (especially general paralysis and toxic-infectious psychoses).

The treatment of the two other large groups of mental disorder, the psychoneuroses and mental deficiency, has special indications, but many of the general remarks to which this lecture is confined apply also to the psychoneuroses.

The principal advances in the understanding of mental disease in recent years have been of the frankly psychological type; but these advances have not helped the treatment of the psychoses to anything like the extent that the cure of psychoneurotic conditions has been facilitated. The other lines of progress have been chiefly in the development of occupational therapy (which is no more than the systemisation of a time-honoured method), in a more detailed attention to the physical health, in making legal provision for earlier admission to mental hospitals, and in improving the internal arrangements of the latter.

But notwithstanding these changes, certain traditional forms of treatment still have a large share, such as are concerned with nutrition, sleep, rest, and safeguarding the patient from physical injury. Open air, recreation, change of scene, and physical exertion are still useful, and their place must be considered. The treatment of mental patients in general practice will be primarily considered, but allusion will be made also to some methods which can only be used satisfactorily in mental hospitals.

The cardinal principles of treatment are to safeguard the patient from any physical danger which his illness might imply, from starvation to suicide; to improve his physical health, not only by attending to local or general bodily causes of ill-health, but by directing his general hygiene; and by persuasion, explanation or other forms of psychotherapy, to improve the patient's mental condition as far as possible.

A necessary preliminary to treatment is a complete clinical examination, physical and mental, supplemented by any special investigations which may seem indicated. Of late years, much emphasis has been laid on focal sepsis as a cause of mental disease. Naturally when such foci are found they should be treated, and, if possible, eradicated; but this does not mean that the patient should be subjected to operation or even to a course of vaccines, where the considerations that would be brought to bear in general physical medicine would not suggest physical improvement in consequence. It has to be remembered that the only mental conditions which have a known direct causal connection with physical disease are those of the

so-called organic reaction-type. In any other type of mental disorder the result, *e.g.*, of removing any focus of infection, as far as the mental symptoms are concerned, is conjectural; and beyond a possible improvement in the general health, nothing definite can be promised. Moreover, before local and especially operative treatment is instituted in any case, the diagnosis of focal disease should be established by such clinical methods as are accepted in the practice of general medicine. A bacteriological diagnosis, such as an excess of streptococci in the stools, does not justify the institution of dramatic measures. Nor is the mental state alone, unless it be of the organic reaction-type (and usually not even then), a sufficient indication for drastic physical measures. The special treatment of conditions of this latter type is the treatment of the underlying physical illness, together with the provision of such additional nursing care as the mental symptoms may demand.

The rest of the physical treatment of the mentally ill consists mainly in measures of general hygiene, but there are traditional and special points which these measures involve.

One point is concerned with *nutrition*. The fluctuations in the weight of a patient are often valuable indices of his state of mind, as well as of his general health. In general, a loss of weight betokens an exacerbation, and a gain in weight an improvement in the mental condition. These two aspects, the body weight and the mental condition, do not necessarily run parallel; where they diverge, and a consistent gain in weight over a considerable period is not accompanied by a mental improvement, the prognosis is unfavourably influenced. Patients whose nutrition presents a problem should be weighed weekly. Most patients who come to be treated for a mental illness are badly nourished; but in endeavouring to increase the weight it is necessary to remember that, although anxiety or other depressing emotions disturb the motility and the secretions of the gastro-intestinal tract, actual lesions of the latter occur only as rare complications. Hence modifications of diet beyond those designed to supply easily assimilable pabulum to a sluggish alimentary canal are usually unnecessary, and may in fact be harmful, since they suggest to the patient, often already hypochondriacal enough, that something is physically amiss. The staple diets in the severer mental illnesses are therefore light but nourishing, and consist chiefly of milk (flavoured with cocoa, tea, or one of the palatable proprietary preparations, such as Ovaltine), eggs, soups, thin bread and butter, and sugar in some form. The aim should be to introduce a full quantity of calories daily (about 3,000 calories), although in cases of extreme debility a beginning must be made with much less. In every instance a certain amount of fresh fruit or fruit juice should be added daily. The most difficult patient is the one who refuses food, not merely from lack of appetite, but from delusions that the food is poisoned or that he is unworthy of it, or from mere negativism. Good nursing, which in an instance of this sort usually implies a nurse with training in mental illness, will often obviate more drastic means than coaxing or spoon-feeding. But in a certain percentage of cases, resort must be had to tube feeding. When this stage is reached, it is nearly always wise to place the patient in a mental hospital, and when food is refused entirely, it is well not to wait longer than two or three days at the most before taking this step. Occasionally, however, a patient who is refusing nourishment may be treated in his own home, if a sufficient number of special nurses can be afforded. In any such instance where tube-feeding is employed, it should be done by the doctor in attendance and not left to nurses, no matter how experienced. The ingredients of the feeds are the same as those recommended for severely debilitated patients, but there is no necessity for considering palatability, and the ingredients, milk, eggs, etc., are all mingled together in one fluid mixture. Again, fruit juice should not be forgotten. It is better to give the feeds three times a day, rather than twice. The actual operation of passing a tube does no physical harm, except in very sensitive patients who may struggle to such an extent that it becomes desirable to reduce the occasions for exhausting struggles to a minimum. In the latter event, feeding twice a day has to suffice; but the advantage with three feeds daily is that a larger total daily intake can be secured, while individual feeds are less bulky. Either a stomach tube or a nasal tube may be used, the end of the tube being conveniently smeared with vaseline just before use. The stomach tube is more easily passed, and, being of wide bore, allows more rapid administration of the meal. In sensitive patients a gag of some sort is essential, inserted between the jaws behind the last molars if possible, to separate the teeth and prevent the tube being bitten.

A nasal tube obviates this trouble. It has the disadvantage of being more difficult to pass, as it tends to be arrested at the base of the epiglottis, and to work up at the back of the pharynx. Whatever method is used, sufficient and experienced nursing help is necessary, with two nurses as a minimum.

Rest has been a traditional recommendation for patients mentally ill, and in many cases it is desirable or even necessary for a time. But rest should be prescribed only after the consideration

that is given to any form of treatment, and not simply advanced in a vague way, as has so often been done. It is, in fact, often a very difficult problem whether a person suffering from one of the less severe degrees of mental illness should be advised rest in any sense, or whether he should be urged to go on with his work. Furthermore, it is simple to order rest for a patient mentally ill, but very difficult to provide the kind of rest he principally requires, namely, rest for his mind. Often the best way to give him relief from his troublesome thoughts is to devise not less, but more, for him to do. The more opportunity there is for his mind to occupy itself with material things, preferably of a constructive kind, the more relief is he likely to get from the personal preoccupations that beset him. Change of interest, and an increase in its range, is often better than mere rest in bed. This holds specially for the milder depressions.

There are nevertheless definite indications for rest in bed. These are principally emaciation, and extreme restlessness, which cause loss of weight and sometimes even direct physical damage from bruising, which the patient neglects. In either case, the requirements are similar—as complete rest in bed as possible, ample feeding, and a special nurse. The latter is indispensable except in the mildest cases, and even in them is desirable. In fact whenever a mentally ill patient is confined to bed, unless it be in a hospital ward, a special nurse should be asked for on various grounds—to ensure that sufficient food is taken by the usually reluctant patient, to keep him occupied, and in many cases to protect him from deliberate self-injury. Sometimes it is permissible to prescribe rest in bed more as a means of veiled restraint than for anything else; but this is possible only for a limited period, except in mental hospitals.

Attention to details of the conditions of rest is important. Correspondence should as a rule be prohibited, and visitors, if allowed at all, must be carefully selected on the basis of a real knowledge of the patient's family and personal relationships, and the cause of his illness. If visitors are permitted, the effect of their visits must be gauged and action taken accordingly.

Whenever rest in bed is ordered, it is better to arrange that it be taken in the *open air* during part of the day, if a garden is available. In mental hospitals, there are nowadays verandahs in which the patient can lie all day, sheltered from rain and the colder winds. The open air has an undoubtedly soothing effect; it reduces restlessness and promotes sleep. But, like rest, the open air is often prescribed like one of the magic cures of old. Time and again the nervous patient is genially or pontifically advised to seek the open air, without any real consideration of why he is nervous, or why the open air may be supposed to be beneficial for the particular patient involved. It should hardly be necessary to say that apart from the symptomatic effects mentioned, and its effect on the general physical health, the open air has no specific action. It neither cures mental illness in itself, nor of itself removes any of the difficulties which have precipitated the illness. It may, in fact, actually increase these because a man whose entire life and training and habits are bound up with some indoor job takes reluctantly to an open-air existence when it lasts longer than the usual holiday, and still more reluctantly to an open-air occupation, for which he has not had the appropriate experience, and very often not the financial backing either. How many people suffering from some of the less obvious forms of mental disorder have been ordered to follow such a pursuit as poultry-farming, which even those in full health and happiness may find very hard to run, especially at a profit! The benefits of the open air are confined, therefore, to symptomatic effects, to improving the general health, and to the indirect benefit offered by prescribing the open air to a town-dweller, namely, change of scene. The rationale of its effect on the general health and on sleep have been clearer since it has been shown that the majority of "nervous" and mental patients, like many hospital out-patients, suffer from a mild acidosis, which is the biochemical aspect of a general physical unfitness. Fresh air stimulates the respiratory centre and increases the plasma-bicarbonate towards normal.

The above cautionary restrictions apply even more strongly to sea-voyages. A sea-voyage was apparently a stock prescription a few decades ago for many forms of mental illness—a prescription which must frequently have led to suicide, recorded as "missing on the voyage." Life on board ship even in these luxurious days is not by any means the easiest to which to adapt oneself. There are some discomforts and restrictions and some very definite disadvantages; for example, on any tourist ship the company is likely to include a number of valetudinarians whose conversation will dismay the patient. Furthermore, it is unfair to saddle a ship's doctor with someone who is potentially a source of great difficulty in management, in a place where the resources for treatment are so limited. Sometimes the recommendation for a sea voyage is absurdly senseless, as in the case of a young man I saw recently who, although anxious and distressed, had been sent on board a ship where no one spoke English, which was the only language he understood. He had to be put ashore at the first port.

Occasionally a sea voyage does much, more by accident than anything else. I have known it to be a useful measure in one instance where the patient enrolled as a member of the crew, and shared their work. Occupation and the distraction induced by the novelty and roughness of the conditions no doubt were responsible for the improvement.

Like several of the other traditional but vague forms of treatment, a sea-voyage provides only a respectable means of running away from such personal difficulties as so often play a part in the production of mental breakdowns. Too often the difficulties, financial, or domestic, or professional, need to be returned to, or are even increased by the patient's absence.

SLEEP

In mental illnesses, insomnia is one of the most frequent and difficult symptoms, and the patient who is most ill and who sleeps only an hour or two per night may not complain of it at all. In cases of this severity, which should have usually a night nurse if they are not treated in the wards of a mental hospital, it is desirable to keep a record of the amount of sleep, and to aim at obtaining by some means a minimum of four hours' sleep per night. In all cases, general hygienic measures, especially fresh air (the patient sleeping in the open if possible), and exercise short of much fatigue, are important. Important also is the provision of occupation in the day-time, so as to minimise the patient's absorption in his own thoughts. A regular daily programme should be outlined, and the usual adjuvants to sleep at bedtime should be employed, such as a prolonged warm bath, and a hot drink, preferably of a sweetened lemonade (glucose, 4 drachms in water, flavoured with lemon or orange). In hospitals equipped for the purpose, hydrotherapy is sometimes beneficial, especially for the mildly agitated patient. In the insomnia of psychotics, if these hygienic measures fail, hypnotic medicaments should be resorted to in order to produce at least a few hours of sleep per night. A mixture of chloral, gr. xxx, and bromide, gr. xl, often works well. Paraldehyde is excellent for occasional use in obstinate insomnias, especially when the patient wears himself out by his restlessness when awake. It has been customary in many hospitals to use hypodermic injections of Hyoscine (gr. 1/100) for the insomnia that accompanies acute excitement, where the patient refuses medication by mouth. But hyoscine is not a reliable sedative, especially if given alone, and it acts better in combination with morphia (gr. $\frac{1}{4}$) and atropine (gr. 1/1000). Certain of the barbiturates, such as dial, medinal and luminal, are now made up in capsules for hypodermic use, and in these emergencies are worth trying before the hyoscine-morphine-atropine mixture is resorted to.

OCCUPATION

This is an important, perhaps the most important, problem in the treatment of the mentally ill. In the past, with the therapeutic apotheosis of rest and the open air, it seems to have been almost a routine to order that the mentally sick should leave work. But in patients not so ill that they betray themselves outwardly to be distraught, or that they cannot give some attention to their work, it is often a nice question whether to advise that they leave off work or not. This holds especially for the mental condition that is most frequently encountered in general practice, namely, depression, in the sense of persistent morbidly low spirits. In the milder cases of this kind I usually attempt to keep the patient at his work. Indications for taking him away from work are pronounced malnutrition, obvious restlessness, difficulty in thinking, the presence of delusional ideas, and the danger of suicide. It might be thought that this left few depressives who might continue at work; but in actual practice it means that a very considerable proportion are allowed to continue working. These remarks apply to depressions of the psychoneurotic as well as of the psychotic type. Sometimes even the risk of possible suicide has to be taken, if the doctor feels that the chance is slight, and if other symptoms, apart from lowness of spirits, are not very pronounced. But this is a risk which should only be countenanced after consultation with a colleague, and a warning to the relatives.

Apart from the question of advice to leave off the daily work altogether in the meantime—and this is advice not to be lightly given, since mental illnesses are nearly always prolonged, and absence from work correspondingly costly—there often arises the question of a holiday, involving change of scene for a number of weeks. Change of scene is an old mode of treatment in mental illness, and its rationale is largely that of distraction and stimulation. Distraction occurs as a matter of fact only at the beginning of a change of scene; after that, habituation sets in, and the patient gets into the old rut, unless precautions have been taken to see that the new locus of treatment has been of an appropriate kind. This is a very important point. It is of little use sending a patient to the country or seaside with no provision or recommendations as to what he is to do there, and among people who do not understand mental disorders. Otherwise, apart from mere distraction

and relief from the immediate presence of reminders of burdensome daily affairs, the only benefit that results from change of scene may be an improvement in the physical health. It is very difficult to find for a patient whom it is not proposed to send to a mental hospital, a suitable place to live in away from his home, in a place which will combine the advantages of fresh air, good food, and country or seaside recreations, with some social contact, good facilities for occupation, and a person who from experience understands mental illness and will see that the programme of occupation is followed. There are considerable numbers of patients whom for various reasons one does not want to send into a mental hospital. The reasons are mainly that the patient is not sufficiently ill mentally or physically to make sojourn in a mental hospital essential, or to make him certifiable; or that there is no actual danger to the patient or to others to be apprehended from leaving him outside of a mental hospital; or that the patient requires a more individual type of attention than can usually be given in an institution. Very often also the patient or his friends object to his entering an asylum, if it can in any way be avoided. This is not an attitude always to be encouraged; but it is not to be wondered at, as, in spite of the recent great improvements in mental hospitals, much might still be done to make them effective places for treatment, as distinct from care and safeguarding. On the other hand, not enough use is made of the seaside homes attached to some mental hospitals, where patients suffering from mild psychoses may go as voluntary boarders, and where experienced supervision is provided, although the occupational resources could usually be improved.

The patient who is not ill enough to be certified, and whom it is not considered desirable for one of the reasons already mentioned to send to an institution as a voluntary boarder, has to be cared for by something of a makeshift. There are a number of people throughout the country who for fees of a variety of dimensions take patients of this kind in their private houses. A few of them have had adequate training, together with a natural aptitude for the work, and make a definite effort to keep the patient systematically occupied in work and games. Such persons are few, and are to be treasured when found. For the same class of patient, a nursing home is suitable only under special circumstances, as where rest in bed and over-nourishment are indicated, or special investigations into the physical condition have to be carried out, or intensive psychotherapy of a technical kind is likely to be beneficial. Before consigning a patient to the restricted conditions of a nursing home, it is necessary to consider the possible duration of the illness, which is often very prolonged. After all the special indications for a nursing home have been fulfilled, transfer to another environment with more scope for occupation and recreation is beneficial.

The desirability in many cases of keeping the patient at his work has already been emphasised. I have known patients to be cured of depressive conditions of long standing by being sent back to work. These were depressions of psychoneurotic type, however.

When it has been decided that the patient must leave work, the problem of how he is to occupy his time arises in an acute form. He cannot usually be expected to find things to do on his own initiative, for his illness deprives him of much, if not all, of the latter. If he is in bed, such occupations as raffia-work, rug-making, and basket-making can be recommended. They are simple to learn, demand some slight effort of concentration, and give a tangible result. For women patients, embroidery is a useful alternative. Naturally it is a good thing to find out what the patient has an aptitude for, and to encourage some appropriate work, *e.g.*, drawing or painting. Apart from work, there are bed-recreations, such as cross-word puzzles, jig-saw puzzles, and wireless. When the patient is up, there is an immense choice of indoor and outdoor work and recreations. Indoors, if he has a mechanical bent, carpentry, the construction of wireless sets, and the like are useful. A schizophrenic patient of mine has probably been rescued from deterioration and institutional care mainly by having a workshop in the house, where he makes useful articles in wood and metal. Other indoor occupations are *repousse* work, china painting, and fretwork. Henderson recommends that the first piece of work should be simple and not too large, so that a quick result can be got. All these activities are applicable in patients living at home, or in a house in the country with one or two other patients. Patients in mental hospitals possess, or ought to possess, greater resources. Naturally they require at first much encouragement and stimulation from those in charge; but after a time it may happen that the patient pursues the occupation from the satisfaction he derives from it. Out-of-doors, work of some sort should alternate with games and other recreations, a mixture of this kind being much better than games alone. There is more chance of permanency of interest and satisfaction in work that is properly chosen; games alone only demoralise the patient by confirming his useless unproductivity. The kinds of out-door work selected must, of course, depend upon liking and aptitude, as far as can be arranged.

Some will find their best outlet in gardening. I have known others discover unexpected interest in remaking a small golf-course, in building walls, or re-making garden paths. Games have to be chosen according to age and previous experience. Golf is a devastating game to recommend to a depressed middle-aged man who has never played before. I have known a depressed woman of 57 with incipient Parkinson's Disease advised to "take up golf"—advice which she actually endeavoured to follow.

NURSING

It is a good working rule that a mental patient should be alone as little as possible. This rule holds independently of the danger in many cases of self-destruction. The companionship of another person, who is interested in his welfare and who understands how to deal with his condition, is one of the best methods of minimising preoccupation, as well as of supplying that sense of being sympathetically understood, which is so important for the comfort of many who are mentally ill. But the patient's own relatives are usually not the people for the job. They are too emotionally bound up with the patient, whether by ties of affection or otherwise, to be able to display a consistent and comparatively imperturbable attitude. Conversely, the patient frequently has not that consideration for relatives which he will have for someone with whom he is not well acquainted, and will consequently use less restraint in his conduct, will be more openly emotional, and less inclined to follow any regime advocated by them. But when strangers are introduced they must be experienced, and their experience must be not only as wide as possible, but specifically also in the nursing of mental diseases. It is uncommon to find that a nurse who has received only a general training and has had little or no special experience of this kind, is of real help in a mental case. Even special training is not enough. The mental nurse, to be successful, has to have a liking for the work, and some inborn gift for it.

The rule, not to leave a person who is mentally ill in solitude most of the day, applies especially to a mental or nervous patient confined to bed, whether in his home or in a nursing home. Of course, in all instances where there is a chance of suicide the constant and unremitting vigilance of nurses is essential. Such patients must not be left by themselves for one moment. But when illness involves such a risk of suicide, it is much better to place the patient in a mental hospital, unless the family expressly desire treatment in the patient's own home or some suitable private home, and can afford ample supervision and the other adjuncts to treatment.

When the patient is suffering only from a mild degree of illness, or is recovering from a severe attack, the constant presence of a nurse may become a handicap, for at a certain stage it may destroy instead of supporting initiative, may remind the patient of his illness, and irritate him in consequence. The time to withdraw nurses, or to shorten their hours of duty with the patient is a matter for experienced judgment. Provision should always be made for sufficient off-duty time for the individual nurse, as mental nursing is the most trying of all.

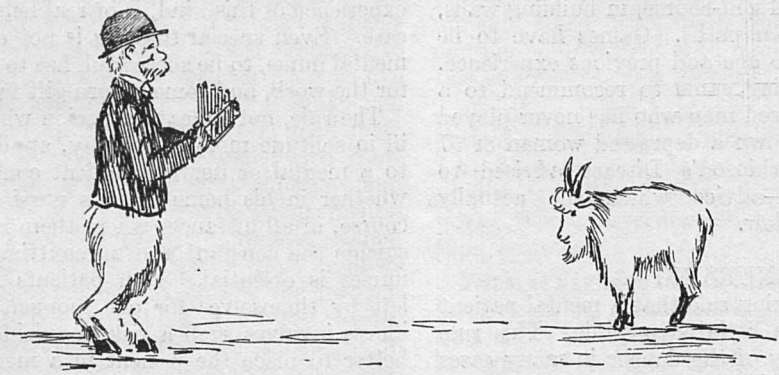
The special forms of treatment that may be employed in mental diseases such as psychotherapy, the pyrexial and especially the malarial treatment of general paralysis and other mental disorders, treatment by continuous sleep, hydrotherapy and the like, must form the subject of another lecture.

Goitre

A Paper read before the Physical Society by Mr. J. S. Batchelor

MR. CHAIRMAN and GENTLEMEN,—In my remarks on goitre to-night I shall endeavour to describe to you the ætiology, pathology and treatment of this condition as it is at present understood. By goitre is meant a swelling of the thyroid, and as such is not a disease, but a clinical manifestation. It occurs in many physiological and pathological states of the gland which are as yet far from being clearly understood. Despite the fact that the condition has been familiar to the medical profession for a considerable number of years, and that the function of the gland and its diseases have been extensively studied by such men as Marine, Lenhart, Plummer, Kocher, Berry, Williamson and Pearse, and many others, we are far from having a clear understanding of the part played by the gland in the body, and of the relation between the clinical and pathological manifestations of thyroid disease. Many of the difficulties appear to be due to an incomplete or incorrect conception of the structure of the gland, and of the relationship between the functions of the gland and its secretions in the tissues of the body. Before considering the ætiology of goitre I shall therefore describe some points in the anatomy and physiology of the gland.

The anatomy of the thyroid as it is generally understood is so well known that I shall only



The Forsaken Goatherd Mourns his Departed Companion

Alas, poor Hayward! Now thy Heath is bare,
Thy dim retreats assume a quieter air.
No longer down thy green and leafy ways
Will Pembrey's lute recall the goat that strays.
Thy nymphs no longer now affrighted flee:
Thy hemidryads leave the sheltering tree.
The goat by man, the man by God misled,
For life's unreason seek a rule instead.
The goat, obedient 'neath an urban roof,
Pursues an erring path with blackened hoof;
The swain, excited by his callous muse,
Expands on Hunter and corrects Royle's views.

refer to some points in the microscopical structure that call for special mention. The lobes are divided by strands of connective tissue into lobules, this lobulation becoming especially obvious in some of the pathological conditions which will be referred to later. The lobules are composed of alveoli or follicles lined by cubical epithelium and containing, in the majority of cases, colloid. The interstitial tissue which runs between the follicles contains many blood-vessels and lymphatics which lie in close relation to the bases of the cells. These cells have no basement membrane. The passage of secretion from the cells into the vessels lying in the stroma is therefore facilitated.

Williamson and Pearse, [1-2] however, have put forward an entirely new idea of the minute anatomy of the gland. They describe the lobules as being composed of "gland-units." Each "gland-unit" consists essentially of cylindrical columns of cells lying in a sinusoidal lymphatic space. Each sinusoidal space is an extension of the intra-lobular lymphatics, and as such is lined by endothelium, surrounded by a capsule of fibro-elastic tissue derived from the stroma of the gland. Blood-vessels accompany the lymphatics, and enter and leave the sinusoid at its points of conjunction with the lymphatics. Within the sinusoid these blood-vessels form a basket-work of capillaries surrounding the epithelial columns. The appearance presented by the "gland-unit" varies with its stage of activity. Williamson and Pearse describe three processes or phases of activity:

(1) A vesiculate phase.
(2) A lacunate phase.
(3) An indifferent phase.

In the vesiculate phase the colloid collects in the centre of the epithelial column, which ultimately becomes transformed into a series of vesicles containing the familiar colloid and lined by cubical epithelium with darkly staining nuclei. In the process of lacunation granules first accumulate in the cells, followed by the appearance of vacuoles which migrate towards the centre of the column. Here the vacuoles fuse to form a lake of clear fluid or secretion which distends the column in its whole length. Coincident with these changes in the epithelium, the sinusoid and its lymphatics also become distended with this fluid, which often contains aggregations of lymphocytes. During this process of lacunation the nuclei of the cells stain less darkly and also migrate towards the periphery of the column, making the cells appear columnar in shape. In the indifferent phase the columns are solid, with no formed lumen. In a normal gland the process of vesiculation or colloid storage predominates, and tends to mask any secretory activity as evidenced by lacunation. Microscopical examination of casual samples will probably only show vesiculation. But if selected samples are examined, areas of lacunation, indicating secretory activity, will almost certainly be seen. Williamson and Pearse[3] suggest that the gland has two functions—one to produce a secretion, as in the lacunate phase, and the other to store colloid, as in the vesiculate phase. They suggest that both phases of activity are essential for the normal functioning of the gland. This conception of the anatomy has an important bearing on the various pathological states which occur in goitre, and I shall refer to it again.

The physiology of the gland again presents us with many difficulties. That the function of the thyroid is intimately connected with the metabolism of iodine has been recognised for years. This iodine occurs in the colloid, which is chemically an iodo-thyro-globulin. In 1916 Kendall isolated an active principle from the gland, called thyroxin, which contains 65 per cent. of iodine. Harrington in 1926 showed thyroxin to be related to tyrosin. The discovery of this iodine-containing substance has led to its being regarded as the active principle of the gland, and the bulk of the work on thyroid physiology has centred around the relationship between the iodine brought to the gland and the thyroxin secreted into the general circulation. The generally accepted view has been that the iodine brought to the gland is stored in the colloid, from which it is withdrawn by the cells and secreted to the tissues as the active principle thyroxin. On this simple basis the symptoms of toxic goitre or Graves' Disease have been ascribed to the secretion of an excessive amount of thyroxin or of an incomplete thyroxin molecule,[4] by a gland subjected to some external stimulus. According to Marine,[5] such a stimulus acts by causing an excessive demand for circulating iodine. This stimulates the gland to produce more thyroxin, and in this way the histological picture of cellular activity occurs. Plummer[4] has shown that the basal metabolism of the body is intimately related to the amount of circulating thyroxin. He estimates that the average daily consumption of thyroxin in the tissues is between 0.50 and 1 milligram, and he states that 2 milligrams of thyroxin a day may hold the basal metabolism from 20 to 30 per cent. above normal.

Williamson and Pearse, [1-2-3] however, from a careful study of the anatomy and physiology, have arrived at the conclusion that the production of thyroxin is not the sole function of the gland. They point out that two distinct histological processes occur:

(1) The storage of iodo-colloid.
(2) The production of secretion proper.

In their description of the anatomy vesiculation represents the storage of iodo-colloid, and lacunation the production of secretion. In diffuse toxic goitre, or Graves' Disease, the storage of colloid is absent and the production of secretion predominates. They maintain that the chemistry and the biological effect of iodo-colloid, or thyroxin, is not the same as that of secretion. Their investigations brought them to the conclusion that the thyrotoxicosis of Graves' Disease is due, not to a disturbance of the iodo-colloid function, but to a disturbance of the function of secretion proper. The secretion mobilises the iodo-colloid of the vesicles, with the result that there is an excess of iodo-colloid or thyroxin circulating in the blood, as evidenced by the raised metabolic rate. Removal of this secretory tissue allows of the return of iodo-colloid to the gland. Similarly, administration of iodine is followed by a resumption of colloid storage. But the thyrotoxicosis is not related to the absence of colloid, for the symptoms still persist after its return to the gland following iodine therapy. Marine's theory that the histological appearance of activity in the gland depended on an increased demand for thyroxin cannot be true. The activity should be evident in the well-filled colloid vesicles, but this is not so. The follicles are full of secretion. The fact that excision of secreting tissues produces amelioration of the symptoms obviously shows that a demand for circulating thyroxin is not the source of the trouble.

From these investigations we must realise that the gland has two distinct functional activities in the storage of iodo-colloid and the production of secretion proper. We must understand that both functions are taking place together in the normal gland, but that the process of colloid storage predominates, and masks the process of lacunation and production of secretion. In Graves' Disease the thyrotoxicosis is due to the exaggerated secretory activity, and the absence of iodo-colloid in the gland is merely a secondary effect of this enhanced activity.

Having now considered some of the points in the anatomy and physiology, we may go on to discuss the ætiology of simple and toxic goitre.

ÆTIOLOGY

In considering the ætiology of goitre, we must bear in mind the large part played by the thyroid as a functioning organ of the body. In general, it may be said that by its secretions it controls the activity of the tissues and regulates metabolism. In the exercise of these functions the histological appearance varies considerably. We have already mentioned that in the normal gland areas of secretory activity will be found in the midst of areas of colloid storage, if looked for carefully. It is important to realise that these changes are continually taking place in response to the demands of the body. It will then be easy to understand the changes found in the various forms of goitre. Under normal conditions the revolution of this cycle of activity is inconspicuous and restrained, but when the demands on the gland become excessive the increased activity may become obvious by the formation of a goitre. The stimuli that may act upon the gland are numerous. Among the most obvious and important factors are sex, puberty, menstruation, pregnancy, lactation, diet, iodine intake, infection or mental strain such as excessive emotion or worry. The healthy thyroid will react actively and rapidly to these stimuli, but when the stimuli are excessive, or when the gland is crippled by malnutrition, it will have to exert itself to its utmost or even enlarge in order to keep pace with the requirements of the body upon it.

Having considered the general functions of the gland in the body, I shall now discuss the causation of simple or endemic goitre.

Simple goitre occurs in both endemic and sporadic forms. Endemically it occurs in the Himalayas, the Alps, the Andes, in North America around the Great Lakes and in British Columbia, and in New Zealand. The factors producing endemic goitre have been studied extensively by Marine[6] in America and McCarrison[7] in India. But whether or not the factors that they describe are the cause of sporadic cases is certainly questionable.

Of the many factors that have been advanced as producing enlargement of the thyroid gland, there is no doubt that a deficient iodine intake is one of the commonest. Marine[6] has defined simple goitre as "a compensatory enlargement of the thyroid depending on an absolute or relative deficiency of iodine." It has certainly been proved that a slight or moderate enlargement of the gland occurs where the soil iodine or water iodine are low, and consequently the iodine intake deficient. It is two to three times more common in females than in males. In Canterbury, New Zealand,[8] where the water and soil iodine are low, the incidence of goitre in school children is 61 per cent. These were classified as incipient, small, medium or large. In the incipient class were put those with thickening of the isthmus on palpation. These comprised 29 per cent. The small class included those with enlargement of the isthmus and slight visible enlargement of one or both lobes. These formed 26 per cent. The medium and large class formed 6 per cent. Thus, excluding the incipient type 31 per cent. showed

definite enlargement of the gland on observation. In their statistics many writers have disregarded these incipient and small enlargements of the gland. Here we meet with the difficulty of placing a distinction between normal compensatory enlargement and abnormal or goitrous enlargement. It is, after all, merely a matter of degree. Many of the small goitres of puberty subside in adult life, but if the enlargement remains it tends to become nodular in the second and third decades, and then forms the adenomatous type of goitre. As de Quervain puts it, " the influence of a goitrous neighbourhood asserts itself by a change in the histology of the gland towards the adenomatous type."

Although simple goitre develops more commonly at puberty, it may also occur at other periods of life, such as during pregnancy or lactation, at the menopause, and in infection and intoxication. A diet containing an excess of protein or fat has also been shown to produce goitre. Marine maintains that these factors act by producing a relative deficiency of iodine. When the iodine intake is at the border line of safety, the thyroid will remain of normal size until some increased demand is made upon it. The increased demand may be produced by any of the factors mentioned above. It may be a physiological demand, such as occurs during pregnancy, puberty, lactation or the menopause, or it may be due to infection or an unbalanced diet.

While in America, Switzerland and New Zealand deficient iodine intake appears to be the primary factor, McCarrison,[7] in Himalayan India, although finding a low iodine intake frequently associated with endemic goitre, maintains that the association is not invariable, and that iodine deficiency in the soil and water is not the ultimate cause of the thyroid enlargement. He asserts that the primary factor is infection introduced into the alimentary canal by pollution or contamination of the food or water supply. While maintaining that infection is the most important factor, he admits that the iodine intake forms an important secondary factor. Thus he has succeeded in producing a high incidence of goitre in laboratory animals fed on an iodine-poor diet and housed under uncleanly and insanitary conditions. Animals on the same diet with the same iodine intake, but housed under conditions of meticulous cleanliness, do not develop goitre. Similarly, goitre may be prevented from developing in animals kept under insanitary conditions by increasing the iodine intake. In some way an iodine-rich diet counteracts the contamination of the food. These observations of McCarrison in India agree with those of Marine, Lenhart[10] and Gaylord in America, who found that they could produce goitre in trout by confining them in filthy, unhygienic tanks, with a relative insufficiency of iodine in the water. By the additional provision of iodine, or by the substitution of a more bacteriologically pure water, they prevented the development of goitre.

Although many of McCarrison's observations on the ætiology of goitre have resulted from experiments on laboratory animals, he has produced abundant evidence to show that the same conditions hold in humans. Thus in a large school in India in which 60 per cent. of the girls were goitrous, he succeeded, by the introduction of a new and pure water supply, in preventing the development of goitre. The iodine content of both the old and the new water supply was low. Again, in the Gilgit Fan, in the Himalayas, McCarrison found eight villages, all situated one above the other on the same unprotected water supply. In the highest village the incidence of goitre was 11.8 per cent., and this incidence increased in the other villages, until in the lowest it was 45.6 per cent. The iodine content of the soil was the same in each village. Thus the cause of the goitre increased in potency as the last village was approached and as the contamination of the water supply increased.

It has also been demonstrated by both Marine and McCarrison that in experimental animals a diet containing an excess of protein or fats may produce enlargements of the gland. By increasing the iodine intake in proportion to the excess of protein or fat, this may be prevented.

How iodine acts in the prevention of goitre is not definitely known. McCarrison[7] claims to have prevented the development, and cured early cases, by the therapeutic use of intestinal antiseptic such as thymol or salol. He regards this as strong confirmatory evidence of the gastro-intestinal origin of simple goitre.

We may conclude that there are many factors that come into play in the production of simple thyroid enlargement. In America, Switzerland and New Zealand the iodine intake appears to be the primary factor. In India, gastro-intestinal infection seems to be of more importance. Diet has also been shown to have some relation to thyroid enlargement. In endemic areas any one of these factors may appear to be of primary importance. But in sporadic cases they must certainly all act together.

When we come to consider the ætiology of that type of goitre which is associated with constitutional symptoms, we again find ourselves confronted by a puzzling and unsolved problem. Plummer [21·4] in America divides " toxic " goitre into two classes —exophthalmic goitre and toxic adenoma—the former due to the production of an abnormal

secretion, the latter to the production of an excess of normal secretion. Dunhill[11] believes that we are dealing with one disease whose manifestations differ under differing conditions, and that these conditions depend on various factors, some well defined and some obscure. Graham[12] has also produced evidence to show that the division of toxic goitre into two distinct types is false, and that the difference in the manifestations of Plummer's exophthalmic goitre and toxic adenoma are of degree only and not of kind. Speaking of toxic adenoma, Graham states that "there is no clinical symptom or sign, or pathological quality, pathognomonic of toxic adenoma." Hertzler[13] has gone further than this, for he regards all forms of thyroid enlargement, not as a series of separate conditions, but as a progressive process. He asserts that the majority of cases of so-called "simple" goitre show slight but definite signs of toxicity, such as nervousness and tachycardia, and he regards acute Graves' Disease or exophthalmic goitre as an exacerbation of a chronic state. He maintains that the patient's statement as to the duration of enlargement of the gland is more often than not incorrect. He suggests that in many cases of primary toxic goitre the patient has had an unnoticed goitre for years. Whether this is the case or not remains to be proved. We are on safe ground, however, in regarding all forms of toxic goitre as being due to the production by the gland of an abnormal secretion. A case where the gland has been goitrous previous to the development of toxic symptoms is best described as a secondary toxic goitre. Where there has been no previous enlargement of the gland it is known as a primary toxic goitre. This classification is certainly justified on clinical grounds and is a helpful general guide in considering the treatment to be adopted.

We may now consider the main factors concerned in the production of a toxic goitre. Dunhill[11] has grouped these under the following headings:—

(1) The stimuli.
(2) The gland.
(3) The cells of the body.

(1) *The stimuli.*—We have already considered many of the stimuli which lead to changes in the gland when we discussed the ætiology of simple goitre. Lack of iodine, infection, an ill-balanced diet, and mental stress and strain have all been shown to be factors in the production of the goitre, especially when occurring at puberty, during pregnancy or lactation, or at the menopause. How these factors act in stimulating the gland to produce an abnormal secretion, with intoxication of other organs of the body, is not known. Of these factors diverse views are held as to their relative importance in the production of a toxic goitre. Thus Langmead[15] considers that infection, leading to stimulation of the gland by toxins, is of major importance. In a series of cases of Graves' Disease he found that 44 per cent. gave a definite history of severe recurrent sore throats or quinsies. Farrant has also shown that severe infections produce histological changes in the gland in the nature of hypertrophy and hyperplasia. Dunhill[11,22] considers that psychic or sexual strain are of considerable importance. He suggests that if the gland is already damaged by lack of iodine, deficient diet, or infection, it may be rendered incapable of standing up to the stress and strain of life. Severe mental strain, due perhaps to business or family troubles, or to a thwarted engagement, or to unsatisfied sexual instincts, may then precipitate a thyro-toxicosis. Various workers have endeavoured to show that these factors act through the medium of the suprarenal gland. Many of the symptoms of thyrotoxicosis may be referred to stimulation of the sympathetic nervous system by adrenalin. That there is some relation between the thyroid and the suprarenal is well known, but it has not been definitely proved that the thyrotoxicosis of Graves' Disease or toxic goitre is due to a disorder of this relation.

(2) *The gland.*—We have already seen that in early life the gland may be acted on by stimuli which lead to hypertrophy and thus produce a simple goitre. This simple goitre may progress to the adenomatous or nodular goitre of adult life. If such a gland is acted on by the pathological stimuli coming under the first factor, a secondary toxic goitre results. Williamson and Pearse, [16] however, suggest that in these goitres the toxic symptoms are not induced by pathological stimuli, but are rather the result of a peri-follicular fibrosis in the gland, sealing up the colloid and secretion in the vesicles and leading to their absorption into the general circulation by abnormal channels. They claim that the continuous thyrotoxicosis of Graves' Disease is produced by this process.

If the gland, however, when acted on by the pathological stimuli, has not suffered the structural changes produced by simple goitre, a primary toxic goitre results. Here the gland and its epithelium are unaltered by previous goitrous changes, and as a result react strongly to the stimuli. In this way is produced the acute and severe manifestations of thyrotoxicosis in young adults. When, however, the gland has already undergone structural change, its reaction, as Dunhill points out, will be modified in so far as its epithelium is already to some extent exhausted and perhaps destroyed. Thus the onset of the disease will neither be so acute, nor its course so

severe. In these later cases the severity of the symptoms produced by the thyrotoxicosis will depend largely upon the condition of the other organs of the body. This brings us to the third factor.

(3) *The cells of the body.*—When these cells are already destroyed by the wear and tear of life, they will be very sensitive to changes in the quality of the thyroid secretion. Dunhill[11] takes the cells of the heart muscle in order to demonstrate this point. In early life the heart muscle is efficient and vigorous, and severe cardiac symptoms are uncommon. Tachycardia is usually all that occurs at this stage. When, however, the heart muscle is already weakened by old age, thyrotoxicosis may lead to severe symptoms. Hence auricular fibrillation commonly occurs in cases of Graves' Disease in elderly persons. Between these early and late groups occur intermediate cases linking the two together.

Thus we see that the pathological stimuli, the condition of the thyroid, and the age and vitality of the body cells form a combination of factors which are all concerned in the pathogenesis of toxic goitre. Variations in these factors produce the numerous clinical manifestations of the disease, ranging from the acute exophthalmic type in young adults to the more chronic cardiac condition of later cases. I shall now consider the pathology of simple and toxic goitre.

Pathology.—Simple goitre is described pathologically under a variety of names. It is known as parenchymatous goitre, simple hyperplastic goitre, chronic hypertrophic and colloid goitre. The most satisfactory appears to be chronic hypertrophic goitre, indicating that the condition is a true hypertrophy in response to an increased demand. It is difficult, however, to separate definitely hypertrophy and hyperplasia. If the hypertrophy is insufficient to meet the demand, hyperplasia will also occur. But in simple goitre the predominant feature is hypertrophy. As Williamson and Pearse[16] point out, this hypertrophy means an increased activity in both the storage of iodo-colloid and in the production of secretion proper. The name colloid goitre has led to much confusion, indicating as it does that it is the iodo-colloid function which is exaggerated.

The gland is soft in consistence, and diffusely enlarged. The cut surface is uniform and presents the translucent and honeycombed appearance produced by colloid storage. It is amber in colour. Microscopical examination shows that both the colloid storage function and the secretory function are enhanced. There are many large colloid vesicles, lined by cuboidal epithelium with darkly staining nuclei. Interspersed amongst these vesicles there occur areas of secretory activity. The epithelium of these areas shows little or no colloid storage, and presents the appearance of the various stages in the production of secretion. Some of the cells form solid columns, and show the stages of granulation and vacuolation. In other columns the secretion has accumulated in the centre of the column—the process of lacunation. These features are well shown in the following section, taken from the gland of a girl aged 15 who had noticed a goitre for two years—a sporadic case of simple or chronic hypertrophic goitre (Fig. 1).

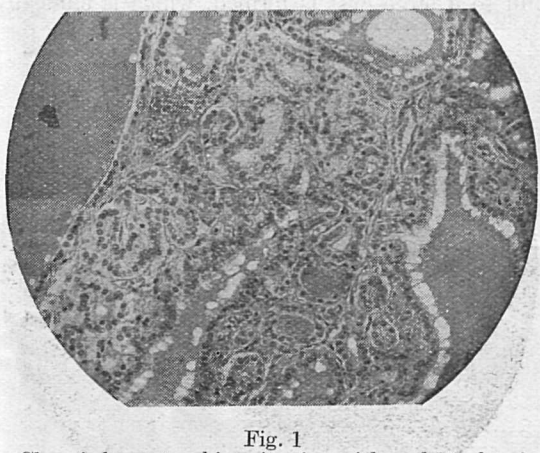


Fig. 1
Chronic hypertrophic goitre in a girl aged 15, showing colloid vesicles on either side, with an intervening area of actively secreting epithelium in the stages of granulation, vacuolation and vesiculation.

Early treatment of such a case with iodine, or the removal of the factors producing the hyper-

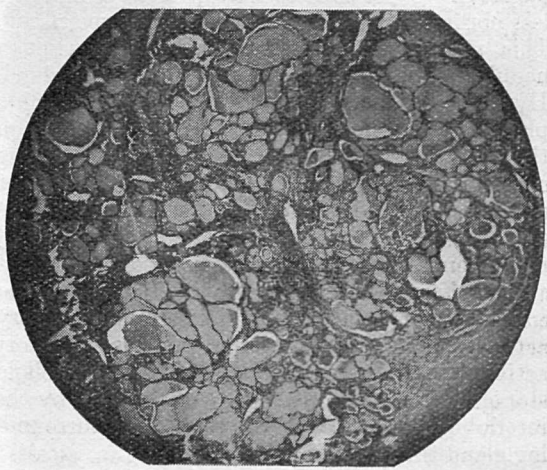


Fig. 2
The early stages in the regression of a chronic hypertrophic goitre—colloid accumulation. epithelial degeneration, fibrous and lymphocytic aggregations.

trophy, will often lead to subsidence of the goitre. But if this does not occur further changes take place in the gland, leading to a more permanent type of structural alteration.

There is first of all an increase of fibrous tissue in the inter-lobular septa. Thus the cut surface of the gland will now appear more lobular, whilst clinically it is still smooth and uniform. The processes of colloid storage and secretion still go on within the lobules (Fig. 2). In some of these lobules the storage of colloid will go on to an exaggerated degree. The lobule becomes distended with colloid, the walls of the vesicles break down, and so a large cyst is formed, which is clinically

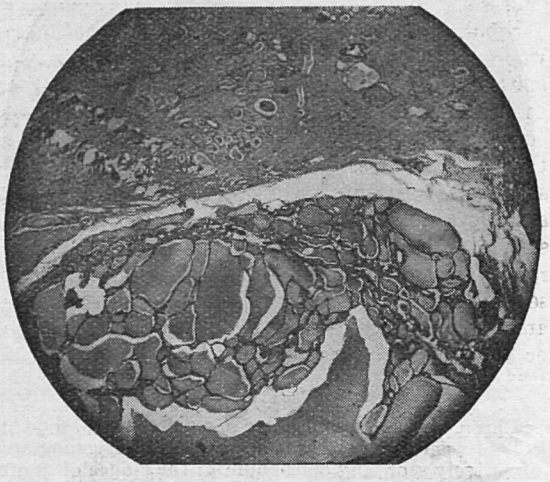


Fig. 3
Advanced fibrosis and epithelial degeneration. Commencement of formation of a colloid nodule.

palpable. Other lobules may present a more or less normal appearance, or may show hyperplasia. This process of hyperplasia also gives rise to nodules or palpable adenomata in the gland. Hyperplasia occurs when the gland is becoming physiologically incompetent, and it is an effort on the part of the gland to produce more functioning epithelium. The same process is seen in other organs of the body, such as the liver. At this stage many of the patients show symptoms of myxœdema. These hyperplastic nodules present all the characteristics of normal gland tissue, and consist of areas of colloid storage and secretory activity (Fig. 4). In some nodules secretory activity may be predominant, in others colloid storage. The nodules are all encapsulated by the interlobular fibrous tissue stroma, and the surrounding gland tissue is compressed.

The final stage is reached when the excessive strain on the gland leads to atrophy and death of the epithelium. A fibrosis then occurs within the lobule, and surrounds the degenerating and broken-up vesicles. This is Adami's " strain-fibrosis." It is at this stage that the formation of hyperplastic nodules most commonly occurs (Fig. 3).

The transformation of the gland into a nodular organ is purely the result of the continuous revolution of the cycle of hypertrophy, hyperplasia

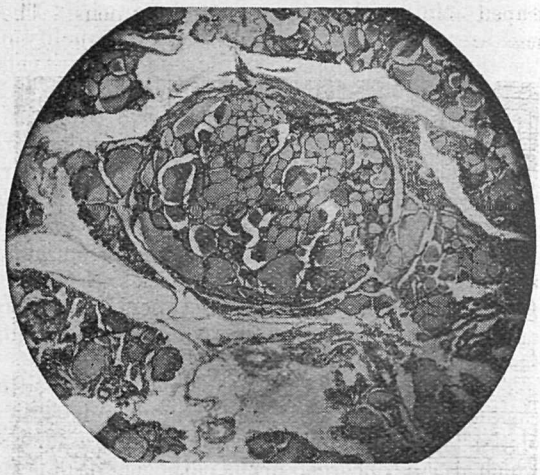


Fig. 4
An encapsulated area of hyperplasia developing in a degenerate gland. (Figs. 2, 3 and 4 taken from the gland of a girl aged 22 who had had a simple goitre for 6 years.)

and involution in a gland subjected to an excessive demand. As a result of this exaggerated activity there occurs the interlobular fibrosis, the colloid nodules, the hyperplastic " adenomata " and the eventual death of the epithelium with " strain-fibrosis " within the lobules.

Toxic Goitre.—We have already adopted the classification of toxic goitre into primary and secondary types.

Williamson and Pearse[16] describe toxic goitre as a heterotrophy of the function of secretion proper. The function of the storage of iodo-colloid is absent. In the primary type the reaction of the gland is generalised, whereas in the secondary type the gland has already undergone structural alteration, and hence its reaction tends to be localised.

I shall first deal with primary toxic goitre. This is usually described as Graves' Disease or exophthalmic goitre, the latter name arising from the frequent occurrence of exophthalmos as part of the clinical syndrome. The occurrence of exophthalmos, however, is not absolutely constant, although more frequent in this type than in the secondary toxic goitre. The naked-eye appearance of an early case of primary toxic goitre is not well known, for the simple reason that surgical treatment is usually not undertaken until this early stage has undergone changes which produce the " beefy "

appearance with which we are familiar. In an early case the cut surface is uniform, dry, granular and pale. The lobules are especially obvious, and the appearance has been likened to that of the pancreas. In this stage microscopical examination shows large numbers of small round or irregularly-shaped acini, with small or absent lumens. The acini are closely packed together with little or no

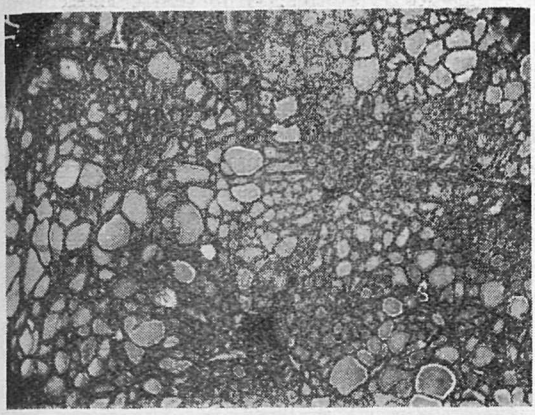


Fig. 5
Primary toxic goitre. Shows actively secreting epithelium and lymphocytic aggregations in the centre, surrounded by areas of colloid storage produced by iodine therapy.

intervening connective tissue stroma. The cells of the acini are columnar in shape, granular or vacuolated, and the nuclei vesicular. Aggregations of lymphocytes occur at various points, and hæmorrhages may be seen (Figs. 5, 7, 9).

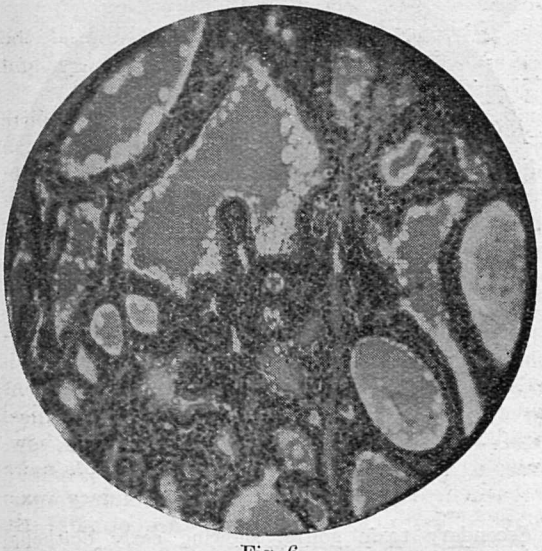


Fig. 6
Primary toxic goitre. Later stage of heterotrophy of secretory activity. Papillary processes projecting into the lumen.

Later cases show a change in both the macroscopical and microscopical appearances. The gland becomes firm and beefy, and the cut surface moist and rough. It now presents the typical "raw-beef" appearance. Microscopical examination shows that the acini have increased in size, and now contain a clear fluid, the secretion. Papillary processes may be seen projecting into the lumen. The process of lacunation is now complete. There is an increase in the cellular connective tissue stroma. This stroma is markedly vascular. It is these latter changes which give the gland its "beefy" appearance. This stage is often described as being typical of toxic goitre (Fig. 6).

Reinhoff and Dean Lewis[17] regard these two stages as representing two distinct types of epithelial hyperplasia, not as different stages of the same process. It is true that both processes occur in the same gland, but we have already seen that different areas of the same gland present the appearances characteristic of various stages of activity. The whole gland is not occupied by the same stage. Therefore it seems unnecessary to regard these two different appearances as representing two distinct types of hyperplasia. They are both part of the same process, and frequently occur together in the same gland.

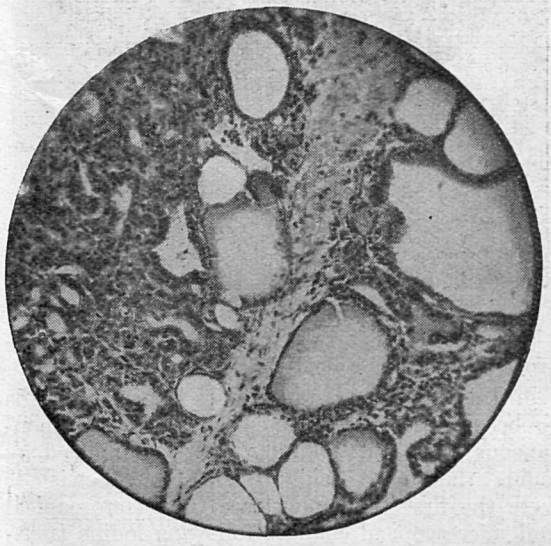


Fig. 7
Secondary toxic goitre. Shows increase in fibrosis of inter-lobular septa, with early epithelial heterotrophy on one side, and colloid vesicles on the other.

When we observe the clinical course of a case of toxic goitre, we notice that periodic remissions occur in the severity of the symptoms. These periodic remissions are associated with characteristic changes in the histopathological picture. The

phase of exaggerated secretory activity is replaced by colloid storage. This change may also be artificially produced by iodine treatment, and consequently is a feature of many of the sections that I am showing to-night (Fig. 5). This colloid storage is an involutionary process, the gland temporarily assuming an attitude of rest. However, the clinical remissions are always followed by relapse, which is again associated with a return of the secretory activity and disappearance of colloid storage. In places, however, this replacement may not be complete, and consequently in long-standing cases of primary toxic goitre where there have been several remissions and relapses, that is, several cycles of involution and hypertrophy, colloid nodules appear and grow in size (Fig. 11). In other areas the involutionary changes are resisted, and the tissue remains in a state of secretory activity. Accompanying these epithelial changes there is an increase in the fibrous tissue in the interlobular stroma, and, if death of the epithelium should occur, a "strain-fibrosis" of the lobules themselves ensues.

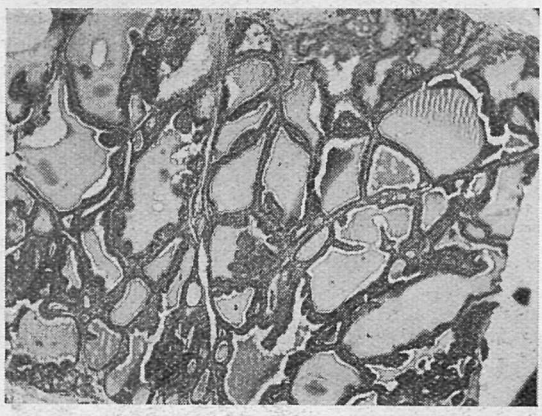


Fig. 8
Secondary toxic goitre. Papillomatous processes projecting into the colloid vesicles.

In this way the gland becomes firmer and tends to become nodular. The process may be spontaneous, as in long-standing cases, or induced by iodine therapy. Reinhoff and Dean Lewis[17-18] were the first to demonstrate the macroscopical and microscopical changes following iodine treatment. The whole process resembles that which occurs during the maturation of a simple goitre.

In a secondary toxic goitre the essential characteristics are identical with those which we have just described. Here the heterotrophic areas of secretory tissue will be localised and encapsulated by the pre-existing fibrosis (Figs. 7, 9). There will also be colloid nodules and cysts, and areas of fibrosis and degeneration. The hyperplastic "adenomata" will show the secretory activity characteristic of the toxic condition. Where this activity has occurred in the epithelium lining colloid vesicles there will be found large papillomatous processes projecting into the lumen. These papillomatous processes consist of tissue engaged in the production of secretion proper (Figs. 8, 10). This form of activity is very characteristic of the secondary toxic goitres. Apparently the colloid of these vesicles is less mobile than in the primary type, and consequently does not disappear from the vesicle when the production of secretion becomes the predominant feature. Williamson and Pearse[16] suggest that this is due to the perifollicular fibrosis, which prevents the escape of the colloid by its normal channels.

Treatment.—In this country we are concerned mostly with toxic goitre, and I shall refer only briefly to the treatment of simple or endemic goitre. This has already been indicated when we considered the ætiology. Marine [5] recommends that the use of a table salt containing 0.005 to 0.01 per cent. of sodium or potassium iodide, would be effective in preventing endemic goitre. An alternative method would be to administer the iodine during the periods of life when enlargements of the gland are particularly liable to develop. Thus tablets containing 1/10 gr. of iodine may be given once a week throughout the school year to children between the ages of 10 and 16. Similarly one tablet may be given each week of a pregnancy or lactation.

Fig. 9
Secondary toxic goitre, showing early epithelial heterotrophy.

Marine states that the danger of taking iodine in doses of 1 to 2 mgrm. daily is negligible, but

that larger doses of 10 mgrm. may produce toxic symptoms or may aggravate an incipient toxic goitre.

When "adenomata" occur in adults, medical treatment will have no result, and the only alternative is enucleation. In general, one would not enucleate "adenomata" unless there were symptoms of dyspnœa or dysphagia, or signs of incipient toxic goitre. Cosmetic reasons also may lead the patient to seek the aid of the surgeon.

In the treatment of Graves' Disease or toxic goitre we have three methods at hand :—

(1) X-rays.
(2) Medical.
(3) Surgical.

The use of X-rays has not found general favour, owing to the impossibility of regulating the dosage with precision, and the danger of damage to the skin. Subsequent operative measures are also rendered more difficult.

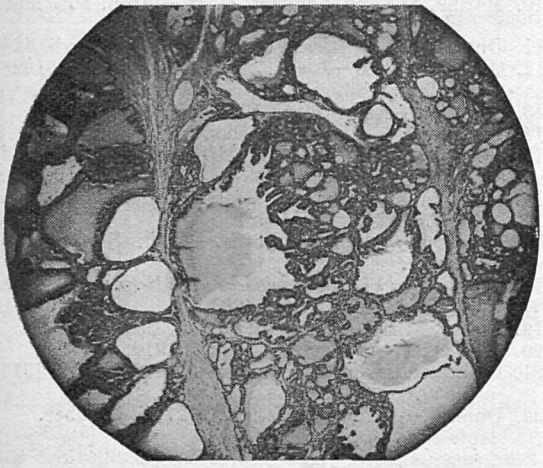


Fig. 10
Secondary toxic goitre. Fibrosis and papillomatous processes projecting into the vesicles.

When we come to consider medical treatment we must realise that spontaneous cure is the tendency in the majority of primary toxic goitres. Most surgeons agree that in early cases a trial of medical treatment is justified for six months. During this time the patient must have absolute rest and complete freedom from all forms of worry and excitement. Removal of septic foci may produce in some cases remarkable results. Lugol's iodine [19] should be used in carefully regulated amounts.

If after six months of rest there is no improvement in the condition, operation should be considered. Further medical treatment is prolonged and uncertain, and any temporary improvement is always followed by relapse. The continuous thyrotoxicosis leads to degenerative changes in other organs of the body, which enhance the dangers of surgical treatment performed on patients who are already rendered physical and mental wrecks by the disease. Apart from these factors the social and economic loss involved by years of suffering necessitates in most people their relief by surgical means.

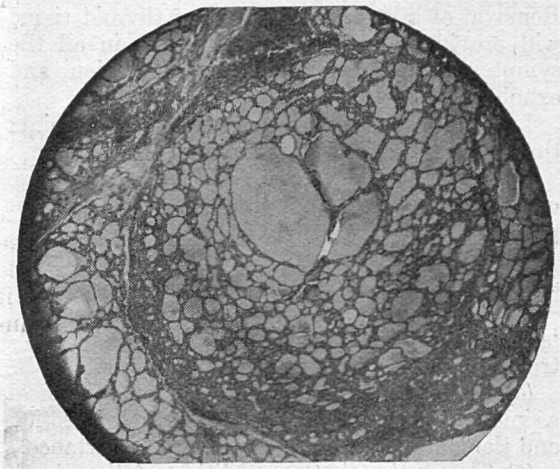


Fig. 11
Commencement of formation of a colloid nodule in a primary toxic goitre.

In secondary toxic goitre there is not the same tendency in the direction of spontaneous cure. These cases often show severe cardiac symptoms, and operation should not be delayed until auricular fibrillation makes the case a bad surgical risk. Internal medication cannot relieve structural changes in the gland. Therefore in these cases surgical treatment is the only method by which we can produce a permanent and satisfactory result.

In 1910 that great pioneer of thyroid surgery, Theodore Kocher, [20] published the results of his operations on 469 cases of Graves' Disease. Of these, 16 per cent. showed absolute cure and 81 per cent. gained sufficient improvement to be able to resume work. His mortality was 3.4 per cent. Kocher insisted that the operation should be performed before the disease had produced permanent damage in the other organs of the body.

At the present day the results of operation performed under suitable conditions by a skilled surgeon are very favourable. The mortality of the operation is about 2.7 per cent. Careful preparation of the patient is important. This should consist of absolute rest, removal of obvious septic foci if necessary, and iodine treatment. In order to obtain a permanent result, partial bilateral thyroidectomy is necessary. Removal of one lobe

will often produce only temporary improvement. In some cases it will be necessary to perform the operation in two stages, removing one lobe at the first operation and the other at a later date. In exceptionally bad cases, preliminary ligature of the superior thyroid arteries may be required. The most dangerous cases are those with severe and acute onset of primary toxic goitre in young adults. Elderly people with extensive myocardial involvement also require careful consideration. Removal of a sufficient amount of thyroid tissue will provide permanent improvement in all the symptoms, including auricular fibrillation and exophthalmos.

I shall now summarise some of the main points that I have discussed in this paper:—

(1) The thyroid has two functions, the storage of iodo-colloid and the production of secretion proper.

(2) Both functions are essential in the normal activity of the gland.

(3) Simple goitre is a balanced hypertrophy of both functions and toxic goitre a balanced heterotrophy of the function of secretion proper.

(4) The stimuli concerned in the production of a simple goitre are many, and that of these infection and the iodine intake are of primary importance.

(5) These stimuli, the condition of the gland, and the vitality of the body cells, are all important factors in the formation of a toxic goitre.

(6) Toxic adenoma and exophthalmic goitre are not separate conditions. Essentially they both present the same pathological and clinical manifestations, and should be regarded as different stages of the same process. The most satisfactory classification of toxic goitre is into primary and secondary types.

(7) Medical treatment is only justifiable in early primary toxic goitre.

In conclusion, in addition to acknowledgements already made, I should like to thank Mr. Slesinger for permission to use material from many of his cases.

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Correspondence

The Squash Court

To the Editor of the GAZETTE

SIR,—Until a few months ago the authorities of the Hospital had graciously allowed students, house officers and others the free use of the squash court; and, appreciating the advantage of *mens sana in corpore sano*, many of us, especially those living in the College, took full advantage of this graciousness and used the court frequently. By means of this health-giving bodily exercise and recreation we succeeded in maintaining our resistance against the germs of disease abounding in the Borough. Thus our efficiency as house officers, dressers or clerks was increased, and our service to the hospital augmented.

Now, however, all this has been changed. The authorities see fit to make a charge for the use of the court. Most of us, I feel sure, fully understanding the difficult financial position of the Hospital, would be willing to subscribe a small amount to the upkeep and care of the court. But to be forced to pay one shilling for one hour's use of the court seems totally unreasonable. Surely the lighting cannot cost the hospital a shilling an hour! The majority of regular players endeavour to get in three games a week. And to have to pay for this, and also subscribe five guineas annually to the Clubs' Union, appears to be but another method of fleecing the unfortunate student. If the squash court does not come under the jurisdiction of the Clubs' Union, may I ask under whose

authority it does come? And may I also suggest that the money collected during the last few months should provide more than sufficient to pay for the cost of having the court cleaned.

Yours, etc.,
"STUDENT."

The College,
Guy's Hospital,
S.E.1.

New Editions for the Library

To the Editor of the GAZETTE

SIR,—Your correspondent, "A Guy's Man," regrets that new editions of text-books are not presented to the Library. The Library Committee is very grateful to Guy's men who may present their original works to the Library, but would certainly not expect presentations of further editions. New editions of the text-books to which your correspondent presumably refers were ordered at the last Committee meeting. There is already a book in the Library where any suggestions for new purchases may be made. Such suggestions are almost always accepted.

Yours, etc.,
MAURICE CAMPBELL,
Hon. Wills Librarian,
Guy's Hospital.

22, Upper Wimpole Street,
W.1.

Reviews

The Detection of Disease. By OSCAR PARKES and ERIC PERKINS. Published by Messrs. Sampson Low, Marston & Co., Ltd. *Price 5s.*

DR. ABRAMS constructed a "box." It is not upon the value of this "box" that he must be judged, but upon the existence and importance of a phenomenon he claimed to observe during his clinical work as a physician. The much-ridiculed "box" was an attempt to construct an instrument that would record and assist in the observation of this phenomenon and its developments. Dr. Abrams himself admitted its imperfections.

The clinical observation occurred when Dr. Abrams was percussing the abdomen of a patient with an epithelioma of the lip. A dull area above the umbilicus "faded" and became resonant when the patient faced in another direction, but recurred upon a return to the original position—facing west. There was no palpable tumour to account for the dullness. Hundreds of patients with various diseases were examined for similar "reflex" dull areas, and some correlation between the type of disease and situation of the dull area observed. Some eminent authorities believe that such delicacy of percussion is impossible, but many reputable medical men state that it exists. Before the above incident Dr. Abram apparently had some reputation as an expert percussor.

The theory put forward to interpret these and other observations was that all forms of matter, including normal and diseased tissue, emanate some waves of nature unknown, akin, perhaps, to radium rays. In the case of the human body these rays or waves from diseased tissue produce "reflex" phenomena which are more obvious in certain electro-magnetic planes.

To carry the experiment a stage further, it was found that these waves could be conducted by copper wire and that a healthy adult connected by such a wire to a diseased person, or to freshly removed diseased tissue manifested the specific reflex to that particular disease. Then it was found that a drop of blood from the diseased patient usually emanated these waves. The "box" became necessary as mechanical aid to amplify a particular wave by inhibition of closely associated waves.

The authors of this book, confirmed disciples of Dr. Abrams, give the further development of these experiments and deal in many cases intelligently with the criticisms of the method. We have searched the known references to Dr. Abrams in the medical literature of this country and can find no conclusive refutation of his claims nor reference to any such facts. The method has been the subject of much unscientific ridicule and abuse and little serious investigation. This would be of no importance were it not that certain controlled experiments by a disinterested committee have given results that suggest some truth in at least part of the claims. A paper was read before the British Medical Association and printed in the *B.M.J.* of January 25th, 1925.

The communication was a report of a small investigating committee consisting of: Sir Thomas Horder; Dr. C. B. Heald, medical adviser to the Director of Civil Aviation; Major H. P. T. Lefroy, head of Wireless Research at the Air Ministry; Mr. M. D. Hart, engaged on physical research on behalf of the War Office; and Mr. Whatley Smith, engaged on similar research at the Air Ministry.

The conclusions were as follows :—

"In view of the general considerations and concrete evidence cited in this paper, the signatories consider that the following conclusions are justified :

1. That certain substances, when placed in proper relation to the emanometer of Boyd, produce, beyond any reasonable doubt, changes in the abdominal wall of 'the subject' of a kind which may be detected by percussion. This is tantamount to the statement that the fundamental proposition underlying, in common, the original and certain other forms of apparatus designed for the purpose of eliciting the so-called electronic reactions of Abrams, is established to a very high degree of probability.

2. That no evidence justifying this deduction is yet available from the work of those who practise with the apparatus as yet designed by Abrams himself.

3. That the phenomena appear to be extremely elusive, and highly susceptible to interference, so that in order to obtain reliable results it is necessary to take the most elaborate precautions, particularly as regards the elimination of effects due to irrelevant objects.

4. That it would be premature at the present time even to hazard in the most tentative manner any hypothesis as to the physical basis of the phenomena here described.

It is impossible to emphasise too strongly that nothing in this Communication is to be taken as implying that any correlation of those changes in the abdominal wall, referred to in conclusion (1), with pathological conditions has yet been shown, or, *a fortiori*, that any justification—physical, pathological, nosological, or clinical—exists for the direct use of either the Abrams or Boyd apparatus in diagnosis or treatment.

To sum up :—

The conclusions arrived at in this Communication leave the position of the practising electronist as scientifically unsound and as ethically unjustified as it was before. They give no sanction for the use of E.R.A. in the diagnosis or in the treatment of disease. Nor does there appear to be any other sanction for this kind of practice at the present time."

It must be understood that this Committee did not investigate the relation of the reactions to disease or diagnosis of disease, and that its criticisms of this use of the reactions are thus not based upon negative results, but upon a failure of those using Dr. Abrams' methods to come forward with scientifically controlled proof of success.

Some diagnostic experiments performed by the *Scientific American*, a disinterested American journal, were completely negative, but were sufficiently difficult to annul the results as a complete refutation of the method.

The matter does not seem to have been pursued further, and it would be interesting to know why. If Sir Thomas Horder has since obtained further information or experience that has made him discredit these experiments it should be published. If not, the British Medical Association or some appointed committee should attempt to solve the problem.

A certain number of qualified medical men are using Dr. Abrams' methods in diagnosis and treatment. Would it not be wise to have some authoritative information to discredit or support the method. It is reasonably claimed that whatever phenomena have been observed the matter should still be confined to the experimental laboratory and not be exploited upon the public.

As for Dr. Abrams himself, there is no doubt that his intellectual attainments in orthodox channels were of a high order. His bent for the unorthodox does not make him of necessity either a charlatan or a genius. He was blessed by inheritance as a multi-millionaire, and left the greater proportion of his money to medical research. Reports describe him as a man of unusual industry, considerable self-control and vigorous habits. It is improbable that such a man hoped to exploit a medical "stunt" for financial gain. With such capital there were more obvious and easy roads.

This book is an excellent reply to all those who have ridiculed or criticised Dr. Abrams or his "box" simply because his methods are not those of the common sense.

To those of us who have had no experience of the matter, the facts and theories must seem fantastic, but the common sense is conventional and, unless outraged occasionally by some other form of sense, tends to remain static.

Guy's Hospital Gazette

(ESTABLISHED 1872)

A Journal of Hospital News, Medicine, Surgery and Dentistry.

Published on Alternate Saturdays. Price 9d.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Sport

Rugby

Guy's v. Harlequins

AFTER one of the most exciting games seen at Honor Oak Park, Guy's on Saturday, October 25th, had to admit defeat to the powerful Harlequin side by 2 placed goals, 2 dropped goals, a penalty goal, and a try (24 points), to three placed goals (15 points).

Both sides gave a most delightful exhibition from start to finish, and as the game progressed the excitement grew intense. At half-time Guy's led by 15 points to 3, but, following the interval, the "Quins," chiefly through extremely fine forward onslaughts and clever support from the backs, gradually assumed the upper hand, and eventually caught up to run out winners as stated.

From a Guy's point of view it was a little disappointing to be beaten after gaining such a commanding lead, but they have the consolation of knowing that every member of the team gave a magnificent display and were extremely unlucky not to score on at least two other occasions.

The Hospital made a further change in the forwards by bringing in L. I. S. Campbell to the front row, and, considering that they were faced by one of the most formidable packs of the country, their display was one of the finest seen for years. They certainly held their own until the closing stages, and their heeling and work in the loose was a revelation.

R. J. Eustace was prevented from playing owing to an injury received the previous week, and his place was taken by J. Howell. The latter gave a creditable performance, but was rather overshadowed by the elusive McCreight, who is one of the best scrum halves in the country.

The "Quins" kicked off and Guy's attacked immediately. A penalty kick awarded to the Hospital gave Walter Lewis an opportunity of finding touch with a good kick to the visitors' 25. After a temporary set-back, Giesen made a splendid cut through the centre, and Fichardt was only prevented from crossing five yards from the line. A high punt was fumbled by Waring, the "Quins'" full-back, and Howell cleverly stole round the blind side, but was stopped on the line. The ball went loose, but Hogbin, who had been very prominent, just managed to touch down as the ball crossed the line and converted with a fine kick.

Guy's kept up the pressure, and a brilliant run by Fichardt was spoilt through over-anxiety, and the "Quins" were awarded a penalty for off-side.

Giesen intercepted a movement by the visitors' threes, but his punt forward was a bit too hard and the ball rolled over the goal-line out of play.

A fine round of passing between Fichardt, Giesen and Johnson nearly led to a score, but the latter was thrown into touch near the corner flag.

From the line-out Hogbin secured, and in a flash forced his way over the line for another try, which he again converted.

Laird set his backs going, and the ball came across to the right when Patterson made a splendid run in which he eluded Walter Lewis at full-back, but Windsor Lewis raced across and made a great save by pushing Patterson into touch at the corner flag when a score seemed certain.

However, the ball came out of the scrum very quickly, and was immediately transferred to the opposite wing, where Cole by a great effort crossed in the corner for a try, which was not converted.

A ding-dong struggle followed, but McCreight managed to get away in the centre and, after selling the dummy, made ground to our 25, where his pass to Cole went astray.

Then followed the finest try of the match Giesen receiving in his own half, slipped through the opposition and, although Rice-Evans made a flying tackle which Giesen eluded, the latter raced in with Johnson and Fichardt on either side and, when faced by Waring, passed inside to Fichardt, who ran in behind the posts for a splendid try, which Hogbin converted.

The "Quins" made strenuous efforts to reduce the deficit, and after Johnson had cleverly tackled Patterson, O'Shea got off-side in front of the posts, but Laird missed an easy kick at goal.

From the kick-off following the interval Price fielded and sent McCreight away, who made good ground before he was collared by Windsor Lewis. With Guy's penalised in their 25, Laird missed another easy penalty, and Fichardt a few minutes later made a perfect interception and, running strongly to the visitors' 25, passed to Popplewell, who was at once floored by the "Quins'" forwards who had converged on him.

Excellent close passing by the "Quins'" three's and a good run by Rice-Evans broke down in our 25, but in the scrum that followed Guy's unfortunately got off-side and Laird landed a penalty goal.

This was quickly followed by a magnificent run by J. R. Cole, who eluded all opposition and scored a glorious try near the posts, which Laird converted.

With only 4 points separating the sides, the visitors made tremendous efforts to get through.

Their forwards made another dashing raid and, brushing aside all opposition, Price just touched down and Dunkley gave the "Quins" the lead by kicking a good goal.

Guy's set up a hot attack for a time, but eventually they were driven back, and from forty yards out Laird dropped a goal.

From the kick-off Guy's pressed heavily, and only first-rate tackling prevented Johnson and Windsor Lewis from crossing. The "Quins" were penalised in front of the posts three or four minutes from time, but as there was no point in taking a penalty kick Windsor Lewis tried the short kick and made a desperate effort to cross near the posts. Unfortunately, he was outweighed by numbers and was brought down on the line, and the "Quins" found touch at half-way. With the last kick of the match, Price from a very difficult angle on the left dropped a perfect goal, which ended one of the finest games seen for some time.

Team.—W. Lewis; A. G. Johnson, J. E. Giesen, T. Fichardt, D. E. Ashdown; Windsor H. Lewis (Capt.), J. Howell; J. S. Batchelor, J. P. O'Shea, L. I. S. Campbell, I. G. Robin, L. B. Hilton, J. R. F. Popplewell, R. A. P. Hogbin, G. F. Lashmore.

Guy's v. Old Blues

ON Saturday, November 1st, Guy's received the Old Blues as their visitors to Honor Oak Park, and were successful by 3 tries (9 points) to a dropped goal and a penalty goal (7 points). The Old Blues were distinctly unlucky to lose after leading up to five minutes of time, and on the run of play thoroughly deserved to win.

On the other hand, with the exception of occasional flashes of brilliance, the form of the Hospital was very disappointing. It is true that they were without Windsor Lewis, who was playing in the Welsh trial, and Johnson, who had not recovered from an injury received against the Harlequins. As a result, Guy's re-organised their back divisions for the first half of the game, but it was far from successful, and it was not until after the interval, when they resumed their usual positions, that they showed any of the sparkle of previous matches.

The forwards were badly beaten in the set scrums, and it is a long time since they saw so little of the ball. On the other hand, the hooking and heeling of the visitors was particularly good, and very seldom did they fail to secure possession.

Guy's kicked off, but the Old Boys were the first to attack, and by good passing gradually pressed to our 25. For a time they kept Guy's on the defensive and, following a scrum near our line, the ball was sent out smartly to K. C. Oliver, who, taking careful aim, dropped a fine goal.

Encouraged by this success the Old Boys continued to press, through good following up, and, but for the timely intervention of I. K. Thomas, very nearly scored.

The defence of Walter Lewis was particularly good in this half, and on two or three occasions he distinguished himself by good tackling and touch-finding.

The backs of the Old Blues were continually supplied with the ball and on several occasions came within an ace of scoring, but somehow they could not thrust home their attacks, and several opportunities were thrown away by technical infringements.

The play in the second half was far more interesting, and as the result of the re-shuffling of the backs, Guy's at once initiated a good back movement, which Giesen and A. J. D. Lewis carried on by a series of passing and interpassing which resulted in the former securing a good try in the corner, which was not converted.

After repelling another attack by Guy's, the Old Boys chiefly through judicious kicking and keen following up gained a footing in the Hospital's 25. Guy's were penalised for offside, and from a difficult angle T. N. Pearce increased the visitors' lead by landing a penalty goal.

The Hospital backs made several attempts to get through, but the defence of the opposition was sound and gave away very little. However, I. K. Thomas made a clever run through the centre, and eventually sent in Lashmore for a fine try behind the posts. O'Shea was entrusted with the kick, but the ball was placed too near the posts and his kick was charged down. This was unfortunate at such a critical time, as conversion of this try would have given Guy's the lead.

The Old Blues made determined efforts after this to increase the lead, but Guy's held out and near the end a long punt was fumbled by the visitors full-back and Batchelor brought him down immediately. The ball went loose, but luckily Hogbin was on the spot, who cleverly dribbled the ball over the line to register the try which gave Guy's the victory.

Team.—I. K. Thomas; D. E. Ashdown, T. Fichardt, W. Lewis, A. J. D. Lewis; J. E. Giesen, R. J. Eustace; J. S. Batchelor (Capt.), J. P. O'Shea, L. B. Hilton, I. G. Robin, L. I. S. Campbell, J. R. F. Popplewell, G. F. Lashmore, R. A. P. Hogbin.

Guy's v. Cambridge University

ON Wednesday, November 5, Guy's entertained Cambridge University as their visitors, and were soundly beaten by 4 placed goals, a penalty goal, and 3 tries (30 points) to 2 penalty goals (6 points).

Cambridge brought a powerful side for this fixture and additional interest was added by the inclusion of C. C. Tanner, the English International, on the left wing.

The 'Varsity were superior to the Hospital in all departments, and their team work was well nigh perfect. J. G. Askew at full back for the 'Varsity played a magnificent game, and his kicking and finding of touch with exceptionally long kicks were faultless.

Both Smeddle and Tanner proved too fast for Johnson and Ashdown, and, aided by their speed, they were responsible for five of the tries registered.

From the kick-off Cambridge started a passing movement which ended in Smeddle finding touch well down the field.

Simpson broke away, but W. Lewis cleared and a long kick by Windsor Lewis sent Cambridge back to their 25, but Smeddle obtained possession and punted ahead. The ball went into touch, but he was allowed to dribble on from half-way and eventually secured the touch down.

For a time Guy's woke up and a good cut through by Windsor Lewis was followed by a strong run by Fichardt, but Phillips saved and found touch at half-way.

Following a burst by Tanner to the Guy's line, a great bout of passing took place along the whole three-quarter line, and Smeddle crossed in the corner for Askew to kick a fine goal.

A minute later Cambridge again got away, but Johnson saved a certain try by stopping Smeddle in the corner. This was followed by some good work by Giesen, who, intercepting, ran strongly to the visitors' 25 before he was collared by Askew. After Ashdown had found touch, Guy's were awarded a penalty and Hogbin kicked a good goal from half-way.

Cambridge returned to the offensive and Askew nearly dropped a goal, while a little later Tanner and Collison ran through the defence before they were checked on the goal-line. Giesen gained possession and broke through, but Askew was safe and sent Guy's back with a huge kick.

Feet up against the Hospital enabled Askew to kick an easy penalty goal and, after a brief stay in the Cambridge territory, Guy's were sent back and a good round of passing between Collison, Tallent and Tanner enabled the latter to race in behind the posts for Askew to convert.

Just before the interval Hogbin kicked another excellent penalty goal for the Hospital, and Cambridge replied with another try by Tanner following some delightful passing between the 'Varsity backs.

Immediately upon resuming, P. W. P. Brook forced his way through the defence and, after shaking off several opponents, scored a fine try, which Askew failed to convert from an easy position.

Stung by this reverse, Guy's pulled themselves together and for a time made the visitors defend.

First Windsor Lewis made a great effort to get through, and reached the 25 before he was tackled and soon after Fichardt found touch near the corner.

Another round of passing initiated by Windsor Lewis nearly led to a score, but Ashdown was brought down on the line. Guy's secured from the scrum that followed, and the ball was passed beautifully along the whole back division to Johnson, who unfortunately dropped his pass at the critical moment.

Cambridge replied with two splendid tries by Tallent and Tanner, both as the result of perfect passing and strong running by the backs, and the second was converted by Askew.

Near the end, Guy's made several efforts to get through, but were met by a solid defence which gave away nothing.

Team.—W. Lewis; A. G. Johnson, J. E. Giesen; T. Fichardt, D. E. Ashdown; Windsor H. Lewis, R. J. Eustace; J. S. Batchelor, J. P. O'Shea, L. B. Hilton, I. G. Robin, L. I. S. Campbell, J. R. F. Popplewell, G. F. Lashmore, R. A. P. Hogbin.

Fencing

Guy's v. Cercle d'Escrime Anglo-Francais

A FIVE-A-SIDE epée match was held at Guy's on November 4th against the Cercle d'Escrime Anglo-Francais, and resulted in a loss for the Hospital by 13 defeats to 12. The Guy's team consisted of Gorer, Rink, Pitts, Hodgkin and Paterson. Gorer fought excellently, and only suffered one defeat, while Rink and Pitts, in spite of wielding a dexterous weapon, were unfortunate to suffer three defeats each. Paterson was inclined to be impatient, but fought well nevertheless, especially in his contest with Lioret. Hodgkin was unsteady at first, but improved at the end and beat Evans after a very good fight.

The Guy's team started off rather badly and suffered a disastrous series of defeats which gave our opponents the match, but in the second half of the match a noticeable improvement took place and Guy's won nearly all the later contests.

The scores were: Gorer, 1 defeat; Rink, 3 defeats; Pitts, 3 defeats; Paterson, 2 defeats, Hodgkin, 4 defeats.

Hospital Information, etc.

Pass List

CONJOINT BOARD.
FINAL EXAMINATION.
October, 1930.

Pathology.

W. H. Bradbeer
A. M. Cantor
H. A. Constable
G. W. Hall-Smith
R. A. Q. Lay
I. Moskinsky
C. H. Rogerson
C. Rutter
E. Sharp
D. Stone
E. W. M. Williams

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†W. V. D. Bolt
†J. Carlton
A. R. Clarke
†P. T. L. Day
†W. J. Johnson
†R. O. Payne
†J. B. Schofield
†C. K. Simpson
R. B. Sutcliffe

Surgery.

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K. Biden-Steele
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K. Harris
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D. W. James
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R. W. McNabb
M. J. O'Donnell
†M. A. Parthasarathy
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†J. B. Schofield
R. N. C. Smith
†A. M. Weston

Midwifery.

J. S. Batchelor
H. Bloom
L. E. A. Dearberg
D. Erskine
I. O. Jones
D. H. Klugman
†F. S. Krusin
N. L. Lamb
G. F. Lashmore
†E. Lethem
W. G. Stanford
A. Segil
J. C. Wharton

† Now Qualified

Notices

DEMONSTRATOR OF DENTAL PROSTHETICS.

APPLICATIONS are invited for the post of Demonstrator of Dental Prosthetics for attendance on three afternoons per week. Duties to commence on January 1st, 1931. Salary £60 per session per annum. Applications should be lodged with the Dean, in the Medical School Office, on or before Monday, November 24th, 1930.

DEMONSTRATOR OF OPERATIVE DENTAL SURGERY.

APPLICATIONS are invited for the post of Demonstrator of Operative Dental Surgery for attendance on three mornings per week. Duties to commence on January 1st, 1931. Salary £60 per session per annum. Applications should be lodged with the Dean, in the Medical School Office, on or before Monday, November 24th, 1930.

Appointments

J. Gray, F.R.C.S., M.B., B.Ch., Assistant Surgeon, Metropolitan Hospital, London, E.1.

N. S. H. Warner, L.D.S., R.C.S. (Eng.), Honorary Dental Surgeon, British Dental Hospital, London.

V. W. L. Wells, M.R.C.S., L.R.C.P., Honorary Dental Anæsthetist, Miller General Hospital.

H. F. J. Willis, L.D.S., R.C.S. (Eng.), Dental Surgeon to the Bermondsey Medical Mission.

Change of Address

J. Gray, F.R.C.S., M.B., B.Ch., 31, North Side, Clapham Common, S.W.4.

M. C. Hart, L.D.S., R.C.S. (Eng.), 44, Oakley Street, Chelsea, S.W.3. *Flaxman* 3521.

Papers by Guy's Men

T. I. Bennett, E. C. Dodds, and J. D. Robertson. Plasma-protein loss with œdema, but without proteinuria, and its bearing on the concept of nephrosis. *Lancet*, 1930, ii, 1006.

A. E. Boycott and G. R. Cameron. Manganese in foodstuffs: its possible relation to cirrhosis of the liver. *Lancet*, 1930, ii, 959.

W. H. Bradley. The tonsils and nasopharyngeal epidemics. *Arch. dis. childh.*, v, 335.

H. C. Cameron. Sleep and its disorders in childhood *B.M.J.*, 1930, ii, 717.

M. Campbell and J. Parkinson. Paroxysmal auricular fibrillation: a record of 200 patients. *Quar. J. Med.*, xxiii, 67.

A. C. Hampson and E. C. Warner. Anæmia and liver therapy in infancy and childhood. *Arch. dis. childh.*, v, 299.

H. D. Harding and A. J. Hall. Four cases of metastases in the brain secondary to carcinoma of the lung. *Clin. J.*, lix, 505.

A. A. Osman. The value of alkalis in the treatment of chronic nephritis. *Lancet*, 1930, ii, 945.

A. E. Rowlett. A survey of oral hygiene in England. *Brit. Dent. J.*, li, 1122.

E. R. Saul. An apparent case of septic psychosis. *Brit. Dent. J.*, li, 1169.

H. J. Starling. A case of megacolon with attacks of paroxysmal tachycardia. *Lancet*, 1930, ii, 1013.

G. F. Still. Second attacks of acute poliomyelitis and the minimal duration of immunity. *Arch. dis. childh.*, v, 295.

D. S. Sutherland. Gangrene associated with scarlet fever. *Clin. J.*, lix, 536.

Death

GREEN.—On September 25th, 1930, Alfred Withers Green (late of Wardrobe Place, Doctor's Commons, E.C.), M.R.C.S., L.R.C.P., at Sandy Bay, Hobart, Tasmania, in his 76th year.

EDS. { P. M. F. B. / P. V. R.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *29th November* 1930 *Number* 1105

PASSIM

THE last few years have seen many changes in the attitude of the average medical man towards the possibilities of the opposite sex in medicine. At first she was that most terrifying and humiliating of God's creatures, the female militant. Then one began to tell oneself that, after all, she could perform a useful function in attending to those professional side-lines which, involving routine and small pay, are the least obvious and least interesting branches of medicine; and she was invited to spend her fresh young life in examining school-children and in Welfare work. Naturally enough, she could not be content with this, and she attempted to show that she could do man's work as well as a man—and that was a mistake. A woman doing a woman's work is an efficient machine and an admirable sight; a woman trying to do a man's work is like a chimpanzee smoking a pipe, amusing and almost human. In fact, too human, as the hospitals and medical schools began to discover, and the smiling valley of opportunity which had opened before her ambitious eyes began to dwindle to a tortuous and dangerous mountain path, abounding in nothing but the long-thorned cacti and good hard rocks of prejudice and opposition.

We see that King's College Hospital has again opened its doors to the female student, and what this may portend for the future we fear to consider. We have always prided ourselves on the fact that this hospital is not hide-bound by convention, that it is sufficiently advanced in its views to emphasise its innate conservatism of heart. A school which has seen so many years and as many lives of fruitless and patient research, so many dramatic and revolutionary discoveries, can never be described as reactionary in its outlook. And yet the woman student is banned like the leper, her name is anathema on all but a few devoted tongues.

If woman could but realise the power that lies in her sex we would see no more of this thrusting into the affairs of man. Considering what power is wielded by some of the Sisters, we are terrified at the thought of a female Visiting Physician. In twenty years we would be a matriarchy, with a few degenerate and despised males hanging on to the surgeon's apron-strings.

▭

IT is with justifiable pride that we note the election of Sir Frederick Gowland Hopkins as President of the Royal Society. This office is the highest post that may be held in the realm of science in the United Kingdom, and its occupants, at any rate in recent times, have been men like Sherrington and Rutherford, whose names will survive even in these days of mad sensationalism when pedestals are almost daily erected and new heroes forced, often unwillingly, to stand upon them in no more than temporary security. Sir Frederick demonstrated in the Physiological Department at Guy's under Starling before he went to Cambridge, where he eventually became Professor of Biochemistry and Sir William Dunn Professor. He was one of the original members of the Medical Research Council and was elected a Fellow of the Royal Society in 1905.

He possesses the distinction of being the first Guy's man to become President of the Royal Society.

▭

AT a Residents' meeting held recently Mr. S. Shone was elected President of the Residents and Mr. J. R. F. Popplewell, Vice-President. Their duties will include the arrangements for the Niggers' and the Residents' Play, and we extend to them our heart-felt sympathy as well as our very good wishes.

▭

WE publish this week two letters of appeal to the charitable instincts which the approaching season of goodwill should be prompting in all those who can afford it.

The first is from Dr. John Fawcett, who is Chairman of the local branch of the Children's Invalid Aid Association. Sir Alfred Fripp was the original Chairman of this branch; Sir Charters Symonds, Dr. H. C. Cameron and Mr. H. L. Eason are Vice-Presidents, and Mr. L. Bromley and Miss Addiscott are active members of the Committee. The Association does much in the way of providing that convalescent aid which one is so often in the habit of recommending when glucose or E.M. *cum* O.M. have been tried without avail; one's recommendations are too often made without any thought as to where the money comes from to carry them out satisfactorily.

The other letter is from Sir Thomas Barlow, the President of the Royal Medical Benevolent Fund, and speaks for itself. This Fund has been established for nearly 100 years, and its activities are so well known that it would be superfluous for us to recount them. There are few of us, we believe, who would not do all in our power to help anyone we knew at Guy's, should we hear of their being in trouble, but it needs an effort of the imagination to send a cheque to the Royal Medical Benevolent Fund so that they may provide some little comfort for the family of a fallen colleague. Surely some of us are capable of making that effort.

We offer our hearty congratulations to Mr. Steward on his recent appointment by the Conjoint Board of the Royal Colleges to inspect the medical schools and examinations of the Egyptian University at Cairo.

He leaves for Egypt on the 28th of this month, and will be away from the hospital for about seven weeks. May we wish him the best luck in this new undertaking?

Our readers must all have noticed with regret the passing of that great pioneer in medicine, Dame Marie Scharlieb. She fought for a cause, not yet won, still strongly contested—the right of women to practise in medicine, and whatever view one may take of the rights and wrongs of that very debatable subject, all are united in bewailing her death as a great and irreparable loss to medicine.

Messrs. Ash & Co. have prepared Christmas Cards, as has been their custom; all proceeds of sale will be devoted to the Hospital funds. These cards can be obtained in the Wills Library, the Counting House, or Matron's Office.

Rat-Bite Fever

A Clinical Lecture delivered by Dr. A. H. Douthwaite

GENTLEMEN,—The following case is of considerable interest in that it embodies the main characteristics of the disease that I am about to describe to you whilst presenting, also, certain hitherto unrecorded features.

A male patient, aged 21 years, was sent to me in January of this year, complaining of attacks of feverishness and feeling "below par," particularly at night-time.

Past Illnesses.—Apart from the common childish ailments and the removal of tonsils early in 1924 the medical history was featureless until May, 1924. At this time, whilst knocking rats over the head in an infected barn he was bitten on the right thumb by one of these creatures. The wound was dressed within half an hour, and the patient returned from holiday to school on the following day. During the next two weeks the thumb became swollen and the wound discharged a little pus. All inflammatory signs then disappeared completely, but he felt out-of-sorts from time to time. About three to four weeks after receiving the bite he had a rigor, pains in the thighs, headache, temperature of 102° F. and pink blotches on the skin. At the same time there was enlargement of the glands on both sides of the neck and in the axillæ and groins. The thumb remained normal. By the next day the temperature attained 105° F. and then fell, to reach normal in four days. The rash persisted for one day only; the glandular enlargement declined with fall of temperature. An apyrexial period of three days was followed by a repetition of the above symptoms, and in this manner the disease progressed for several weeks.

Typhoid fever was suspected, but this was clearly excluded by the clinical features and negative results of the usual specific tests.

Six weeks after the commencement of the illness Dr. Worts, of Colchester, was called in, and promptly diagnosed rat-bite fever. The patient was then given at least eight injections of neo-salvarsan. Feverish attacks of diminishing severity persisted in spite of treatment for three or four weeks, and a low-grade pyrexia was evident throughout July and August with one outbreak of typical fever. Thereafter the temperature fell to normal and the patient appeared to be in perfect health for the rest of the year. From 1925 onwards he suffered from undue lassitude towards the end of the day. The glandular enlargement never completely subsided.

In 1928 he fractured his tibia and, soon after convalescence from this accident, was attacked by pains in the loins, hæmaturia and fever as the result, he thinks, of standing about in a very cold

wind whilst on a shooting expedition. Cystitis was diagnosed, but cleared up rapidly.

Present Illness.—All went well until October, 1929, when he had an attack of feverishness, aching in the limbs, a desire to stretch himself, headache, pain on micturition and slight hæmaturia. The urine at this time was found to contain pus and B. coli. Ever since then he had had similar bouts without urinary symptoms, however. Each attack had been heralded by increasing fatigue, a feeling of abdominal distension and obstinate constipation. It was ushered in by shivering and a rise of temperature to 102° F., swelling of the superficial glands, and intense frontal headache. The fever lasted about 12 hours, and then fell rapidly to normal. The attacks occurred at weekly to fortnightly intervals. One other feature deserving note is the increasing tendency to constipation of the last two years in a man who had never suffered in this way previously.

Condition on Examination.—The following abnormalities were noted :—

(1) Enlarged glands in neck, axillæ and groins averaging in size that of a hazel nut. They were firm and discrete.

(2) 120 pus cells per c.mm. of urine and an abundant growth of B. coli (Dukes).

(3) Swollen and infected lymphoid tissue on the lateral walls of the naso-pharynx (Gill Carey).

(4) Thickened lining membrane of left antrum, from which a few pus cells and staphylococcus aureus were obtained.

(5) " Marked delay in the evacuation of the colon, at the end of six days there being some barium present notwithstanding the administration of a purgative. All parts of the colon show this sluggishness " (Worth).

The patient was then taken into a nursing home for purposes of observation and the treatment of his antral and urinary infection. Both these abnormalities rapidly responded to appropriate measures; only a scanty growth of b. coli could be obtained after ten days. In spite of this a rigor occurred on January 28th with all the symptoms previously described (excluding hæmaturia). Within six hours the fever had abated, but I had the good fortune to see the patient in the throes of a further attack on February 9th. For two days before this a gland lying superficial to the left sternomastoid had become progressively more prominent, but with the onset of shivering and a rise of temperature to 102° all the enlarged glands nearly doubled their size and became tender. The patient presented extremely congested conjunctivæ, a distended and tympanitic abdomen, delirium and a diffuse erythema over the trunk. The spleen was not palpable.

Blood collected at the height of the fever was normal as regards hæmoglobin and red cells. The leucocytes numbered 18,600 per c.mm.; the differential count was polymorphs 84 per cent., small lymphocytes 10 per cent., hyalines 5 per cent., eosinophils 1 per cent. The urine contained only 19 leucocytes per c.mm., but stained films of the deposits showed large numbers of gram negative bacilli and gram positive vibrios.

Blood and Gland Culture.—Dr. C. Dukes undertook investigation of blood collected in the attack, and of a gland removed a few days later. Of the various media employed a positive result was obtained from the blood in trypsinised bullock's heart only, in which on the sixth day actively motile spirillæ were observed.

Inoculation.—Mice inoculated from this culture, and also those inoculated with an emulsion of the gland, developed spirilla in the blood. The organisms remained in the peripheral circulation for a few days only.

Treatment.—The patient was given six weekly doses of N.A.B., viz., 0.3, 0.45, 0.6, 0.9, 0.9, 0.9 grm. After the first three doses there was an abortive attack, but since then there has been no further trouble. Six months later he was perfectly well, the constipation, urinary infection, glandular enlargement and hypertrophic pharyngeal lymphatic tissue having disappeared.

REVIEW OF RAT-BITE FEVER

Most of our knowledge of this disease comes from Japan, where it is prevalent. It was first described by Katsura in 1892 under the name of Sodoku (rat poisoning), but to Horder belongs the credit of the first and clearly independent description of the fever in this country. All three cases of which he spoke in 1909 recovered spontaneously after a variable number of attacks. A polymorph leucocytosis, adenitis, delirium and fever were described by him. He was the first to excise a portion of skin exhibiting the rash and observe the round-celled infiltration of the corium. On clinical grounds he concluded that the " materies morbi is of the nature of a protozoon."

In 1916 Futaki demonstrated the spirochæta morsus muris (now termed spirillum minus) as the specific organism, pointing out that it occurred in wild rats and mice as a natural infection.

MODE OF INFECTION

The majority of cases in man have resulted from a rat-bite, but transmission has occurred through the medium of ferrets, dogs and cats, owing, no doubt, to their proclivity for killing rats. The infected animals usually have a highly infectious discharge from the eyes which may contaminate

the wound. The saliva has not been shown to contain spirilla, but as infected rats suffer almost constantly from bleeding gums and loose teeth it is probable that the act of biting projects a drop of blood from the rat's mouth to the skin of its victim.

Of practical importance is the fact that streptothrix infection may also be derived from rat-bite coincidentally with the introduction of the spirillum minus. This explains the earlier belief of some workers that Sodoku was a streptothrix disease. Furthermore, in cases in which neosalvarsan fails to produce prompt relief, the possibility of a double infection should be considered.

PATHOLOGY

The post-mortem findings in this disease include generalised wasting; parenchymatous degeneration of the heart, liver and kidneys; catarrhal gastro-enteritis and cystitis; meningeal hyperæmia and œdema; hyperplastic lymph glands with dilated sinuses packed with lymphocytes; hyperæmia of the suprarenal cortex, spleen and kidneys; hyaline degeneration of central arteries of the Malpighian bodies in the spleen.

CLINICAL FEATURES

The symptoms usually occur within 30 days of the bite, although the possibility of a two-years' incubation period has been mooted by Japanese observers. In uncomplicated cases the wound heals by first intention, but in about half the recorded cases the site becomes painful and swollen with the onset of fever. Within a few days vesicles form in the immediate neighbourhood and break down, leaving an ulcer with indurated edges and discharging serous fluid containing spirilla. If the discharge be purulent a double infection is indicated, and it is in such cases that streptococci or a streptothrix have been recovered from the regional glands.

Lymphangitis, brawny swelling and œdema of the bitten extremity together with local glandular enlargement may accompany the ulceration, or may occur in the absence of breaking down of the site of the original injury. Yet again, the onset of fever may be marked by swelling of the glands of the neck, axillæ and groins without reference to the position of the rat-bite, as in the case I have described.

The temperature rises with these signs, reaching 102°—105° within 48 hours; it then falls in three days to normal, about which level it remains for three to four days before the process is repeated. The wound heals again in a week or two in spite of recurrent bouts of fever, but the glands, though diminishing in size in the apyrexial periods, actually show a progressive enlargement over the course of several months. At first soft, they become firm, resembling in consistency those usually met with in lymphadenoma. They remain discrete even if the disease persists for many months.

A skin eruption is no constant feature. It may occur two or three times only in a series of attacks, or be completely absent throughout the whole course. The common form consists of a maculo-papular eruption of dusky appearance. The individual spots vary in size from that of a pea to an orange. Of regular outline, these areas are indurated and slightly elevated; they are seldom painful, and disappear on heavy pressure. The distribution is very irregular, the forehead, trunk, and bitten limb being possibly the sites of election. In my case a blotchy rash was described originally, but in the attack I observed a diffuse erythema only was present. The blood always shows a polymorph leucocytosis of about 18,000 at the height of the fever. In chronic cases only are anæmia, polynucleosis and moderate eosinophilia to be noted in the apyrexial intervals.

In chronic cases again constipation is the rule and is associated with a furred tongue, abdominal distension and flatulence.

The central nervous system is affected during an attack as evidenced by a feeling of fullness in the head, headache, vertigo, tinnitus, delirium or stupor. Patches of anæsthesia or hyperæsthesia are common on the extremities. The tendon reflexes are often depressed.

Rare signs which have been reported are pleurisy, bronchitis, splenic enlargement and epididymitis. Conjunctivitis occurs fairly frequently. In severe cases nephritis with the passage of much albumen and many casts may arise.

As regards special tests, it should be noted that the Wassermann reaction is positive in 50 per cent. of patients. The diazo reaction is given in about 20 per cent.

MORTALITY

Ten per cent. of untreated cases die.

UNUSUAL TYPES

There is an apyrexial type associated with stupor, subsultus, vomiting and often death. Abortive forms in which spontaneous recovery has occurred after a few bouts of fever are by no means rare.

PROGNOSIS

The prognosis is good provided that appropriate treatment is given. Failure to respond to arsenical injections, or a history of a purulent discharge from the wound produced by the bite, should indicate a slightly more guarded prognosis because

of the probability of a mixed infection. However, even in these cases, if the spirilla be destroyed the body appears to deal successfully with the subsidiary organisms.

As no case has been reported of tertiary lesions produced by the specific organism, there is every reason to believe that once the constitutional disturbances have completely subsided no fear need be entertained of the development of late manifestations such as occur in syphilis.

TREATMENT

This consists of the administration of N.A.B. in the manner already indicated. The majority of cases appears to be cured by two or three doses of 0.45 gramme.

CONCLUSION

Reverting to the case of rat-bite fever which I have described, you will notice that the symptoms which he presented were :—

(1) Recurrence of symptoms after a long period of malaise in spite of exceptionally thorough treatment at the commencement of the illness. Such a history is, to the best of my knowledge, unique, and is conceivably to be associated with the observation of a purulent discharge from the rat-bite (double infection).

(2) The successful cultivation of the spirillum minus from the patient's blood, a result previously unrecorded in this country.

(3) The transient nature of the final bouts of fever.

Of special interest is the observation of the marked colonic type of constipation and heavy infection of the urine with B. coli as a secondary result of the underlying disease, and their rapid disappearance with eradication of the rat-bite fever.

My thanks are due to Dr. Worts for permission to report this case.

The Physical Society

A JOINT meeting with St. Thomas's Physical Society was held in the College Smoking-room on Thursday, November 20th. The number of Guy's men was very small and there were very few of the older members present, whereas St. Thomas's had turned out in force. Mr. Ferguson was in the Chair, and he had collected some very good cases, though at the last minute he was deprived, almost without warning, of two of the most interesting patients.

Mr. WRIGHT described the case of an elderly man, suffering from chronic sinuses from both epididymes, who had lately developed a painful swelling of the right knee with wasting of the calf and thigh muscles, the latter symptoms dating from a ride in a charabanc.

The undoubtedly correct diagnosis of bilateral tuberculous disease of the epididymis with synovial tuberculosis was brought forward by Mr. Stevenson, and Mr. Northfield, concurring, suggested an old renal phthisis as the cause.

It was then suggested by various speakers that the real cause might be either gummatous or gonococcal, and one speaker pointed out the depravity of those who go down to the sea in charabancs.

Mr. Colbeck's suggestion that immobilisation of the knees would effect a cure was not accepted by one man from St. Thomas's, who advised bilateral orchidectomy as well.

To Dr. Hampson's inquiry as to the clinical findings in the chest and the urine, the time-worn but unsatisfactory reply was made that the "patient only came in yesterday."

Mr. Wright vigorously defended the man's integrity, and denied the slightest suspicion of any venereal infection in the ætiology of the condition.

Mr. MILLER briefly told the story of an elderly woman with a swelling in the parotid region, and invited a diagnosis.

With very few dissentient voices the meeting was in favour of a diagnosis of a mixed salivary tumour, on the exact pathology of which a debate raged, as furious as it was ill-informed.

The suggestion that the risk of the anæsthetic almost counter-balanced the advantage of having so little disfigurement corrected was stoutheartedly contradicted by Mr. Robertson, who asserted that at Guy's the risk was infinitesimal.

Mr. CURTIS showed a woman who, complaining at first of dysphagia, now vomited all her food. A mercury tube had been employed and had met with scant success, and he illustrated his remarks by some admirable X-ray photographs of her œsophagus.

Mr. Stevenson asked whether the condition could be explained as an achalazia of the cardia associated with a Plummer-Vinson syndrome, and wanted to know the results of a blood count.

An argument then arose between some of the visitors about the effects of psycho-analysis and about the effect of sympathetic ablation on

sphincters generally and on the cardiac sphincter especially.

Dr. Hampson, in the course of a few remarks, explained how relief of symptoms is not always identical with cure of the underlying disease, though to the patient, as he pointed out, the two terms are synonymous. He also strongly deprecated the habit of labelling symptoms as functional simply because the physician had not been capable of discovering any organic lesion. To the Guy's men the most amusing remark of the evening was made by a man from St. Thomas's, who, quite seriously, took Dr. Hampson to task for his excessive surgical zest.

Mr. COLBECK told the history of a young man suffering from pain and stiffness of his back. Clinically, some tendon jerks were absent, and he had an area of sacral analgesia. The patient had a long and complicated story in which tonsillectomy, deep X-ray irradiation and operations upon the glands of his neck all figured.

Diagnosis of tuberculous disease of the spine and of lymph-adenomatous deposits pressing on the cauda equina were equally well supported; and we were glad to hear the intrathecal injection of lipiodol denounced by Mr. Southwell as being an operation not lightly to be undertaken, involving, as it did, the risk not only of severe and persistent pain afterwards, but even of death.

Mr. Northfield advised a thorough course of treatment in a sanatorium, and most people present were inclined to agree with him.

Mr. SOPER'S case excited a considerable amount of discussion. A suprapubic swelling had been incised and had been found to contain a small sequestrum. Ever since, the wound had been leaking urine, and an X-ray photograph showed considerable absorption and new growth of bone around the symphysis pubis.

A urachal cyst was suggested, but many speakers held that such a cyst could not explain the bony involvement, and the case was shelved temporarily with a diagnosis of a chronic septic infection of the symphysis.

Amalgam Crowns and Synthetic Faced Amalgams

A Paper read before the Guy's Hospital Dental Society by Mr. J. Bunyan

MR. PRESIDENT and GENTLEMEN,—The purpose of this short paper is to show that it is possible, and in some cases desirable, to use amalgam as a filling material much more frequently than is done at present, particularly in the anterior teeth.

Although the properties of amalgam are known to most of you, I propose to give a short resumé of them.

(1) *Plasticity.*—It is plastic, which allows the use of undercuts and great ease in manipulation.

(2) *Strength.*—It will stand up to attrition and wear as well as, if not better than, gold. It is more brittle, however.

(3) *Colour.*—Its burnished silver appearance, if kept, is less noticeable than gold.

(4) *Edges.*—An amalgam filling allows perfect edges to be attained with comparative ease and without undue laceration of the gum margin.

(5) *Disadvantages.*—Under heavy, continuous pressure, amalgam tends to flow. In text-books it is said to shrink, but I think there is very little trouble from that in modern amalgams. Some amalgam fillings are seen to turn black, but if a good quality amalgam is used, and the patient takes ordinary care with the tooth-brush, the filling will keep its colour. Teeth are also seen to discolour, but if all caries is removed and all the dentine covered with osteo, there will be no staining.

In the Extraction Room one often sees condemned molars which are very carious, but still vital and firm in their sockets. If there should be an opposing tooth, or should such a tooth be useful as an anchorage for a denture, then every effort should be made to save it.

The large inlay restoration in posterior teeth is in theory perfect. In actual practice, the second or third attempt, after much laceration of the gums, results in a poorer restoration than could be obtained first time and with the minimum of polishing trauma, with amalgams.

The caries is removed by the usual methods, preferably under a local anæsthetic. It will be found that one can usually lift the whole of the crust of caries with a large spoon excavator.

With these large broken-down teeth it is usually impossible to use a rubber dam. One must do one's best with cotton-wool rolls. As the operation is rather protracted, a folding rubber gag will be found to ease the discomfort of the patient holding his jaw open.

Prepare the cavity by chiselling the edges straight, leaving a rounded corner at the cervical

edge, where there is a cusp remaining. Usually the whole of the dentine is gone from under the cusp, so that a considerable amount of enamel must be cut away. Keep as much as possible of the cervical edge of the tooth above the gum, no matter how thin it is as long as it is sound tissue. Run a small inverted cone bur round inside the cervical edge to make a slight undercut. Drill a small pit right opposite the cusp.

Then cut off a piece of wire about the gauge of the sprue wire used in the Conservation Room and make it to fit tightly in between the cusp and the pit. Mix up some osteo fairly thickly and put a good covering over the pulp chamber, taking care to leave a space under the length of the wire, but cover the ends. This wire provides a good anchorage against any forces which may be exerted on the filling. Scrape the osteo from the undercuts before it hardens. The cavity is now ready for the insertion of the amalgam.

The matrix is fitted, using either a Bonnalie or a copper band. Make sure the gum is anæsthetic, and shape the matrix to run deeply round the cervical edge. I find it better to contour the matrix when nearly all the amalgam has been inserted. Pack the amalgam in very hard, and build it a little too high. Get the patient to close on it to get the "bite." Don't say "bite," or you will probably find the patient has shattered the filling.

Then shape up the occlusal surface, and see that the amalgam is past its brittle stage before removing the matrix. If a copper band is used, leave it on until the next visit.

If there is no cusp remaining on the tooth, a good form of anchorage is to run two old, fine fissure burs into the dentine and snap them off, leaving the ends in.

There may be a slight periodontitis or pulpitis for a few days, but it soon wears off; a tooth so restored should last many years, providing the patient's resistance remains good and that he keeps the tooth clean.

SYNTHETIC FACED AMALGAMS

There are five classes of cavities suitable for these fillings.

(1) Cavities in incisors and canines involving one tip and extending to the cervical edge.

(2) Cavities involving the corner only.

(3) Large interstitial cavities involving both sides of the tooth.

(4) Teeth (usually central incisors) with the whole of the incisive edge missing.

(5) Cavities in premolars.

1.—*To restore* (1).

Clean out all the caries, and make the general shape of the cavity the same as for a gold inlay. Undercut the sides and key-way, not too much, an angle of 85° is ample. To make a sharper angle than this is to weaken both the tooth and the amalgam. The key-way should be rather deeper than that for a gold inlay. Line the cavity with osteo, scraping it away from the undercuts. Make sure that all dentine is covered. A Bonnalie or ivory act well as a matrix, but the easiest way is to use an ordinary celluloid strip between the thumb and finger.

Use a good amalgam. The hospital amalgam is quite good, but is rather slow in setting and is inclined to turn black. I prefer S. S. White's to anything—it keeps its colour and has a beautiful texture.

Mix the amalgam hard and pack in hard. Make sure that the key-way is filled. Build to excess and then burnish down to clean the bite. Burnish the palatal surface and trim the edges, but leave the labial surface until next visit, and warn the patient not to chew nuts or American gums for a day or so.

Next visit burnish the filling up and cut out the window with a small inverted cone bur. The models show the shape of the window. The amalgam cuts very easily, but be careful at the edges. At the incisive edge the first angle should be as near as possible at 90° to the surface of the synthetic, thus avoiding a feather edge.

The synthetic relies almost entirely on the osteo for retention. Mix the osteo quite thin, and cover the amalgam. Mix the synthetic into a plastic state and press it on before the osteo is quite dry, taking care not to squeeze the osteo to the surface. Shape the synthetic with a celluloid strip and, before it is quite hard, burnish it with a large plastic and vaseline. This gives a very good surface.

2.—*Corner Restorations.*

These are very easy and will be obvious when you look at the model.

3.—*Cavities on both sides of the tooth.*

In this case, the cavities are joined by a wide fissure cut through the lingual enamel. The procedure is then the same as for a single cavity.

4.—*The whole biting edge.*

This applies more particularly to cases of fractured central incisors. It is quite common to find children in Out-Patients who have fallen down and broken one or both centrals right across. These children have usually a more or less pronounced superior protrusion. If the child is young the tooth can be capped, but a girl of fourteen requires something done which will not spoil her appearance.

Let me give the case of a girl whom I treated six months ago.

The patient first came up two years ago and the teeth were capped. Six months ago she came to me for something more to be done. This was the situation :—

(1) The teeth were vital. Any restoration which required a post was ruled out.

(2) The labial enamel was hypoplastic and carious. A porcelain tip would have been unsuitable.

(3) A gold inlay would have been too expensive, and I doubt whether it would have stayed in.

(4) The patient was still at school ; a porcelain jacket crown was contra-indicated.

I decided to try synthetic amalgams. A local was given and the caps removed. The enamel was stoned off, and a key-way cut in the lingual surface and running through the dentine. The tip was undercut all round.

Celluloid strip was used as a matrix and the amalgam, mixed hard, packed in from the front. The only trimming was on the lingual surface and the edges, the front being left until the amalgam had hardened. You will notice on the model that there is no undercut on the labial surface of the dentine. I relied solely on the osteo for retention.

These fillings are still in perfect condition.

5.—*Premolar restorations.*

The tooth is filled in the ordinary manner, and, after polishing, the window is cut at the same depth all the way round. This facing is well worth doing in a girl.

I will now state what I consider to be the advantages of synthetic faced amalgams.

(1) They save both time and money, both at Guy's and in practice.

(2) They are completed in two visits.

(3) The average operator can always make sure of good edges without injury to the gum.

(4) The fillings will definitely stay in by virtue of the undercuts.

(5) The amalgam biting edge is almost invisible —the æsthetic effect is better than that of gold.

(6) In most practices the dental surgeon has neither the time nor the aptitude for porcelain restorations. Synthetic faced amalgams provide a good substitute.

There are a few theoretical objections :—

(1) Staining.—The amalgam does not stain the synthetic, neither does it stain the tooth if the dentine is properly lined.

(2) Brittleness.—It is astonishing what bite amalgam will stand up to. Not one of the synthetic faced amalgams which I have done has broken.

(3) Flow.—I have not done these fillings long enough to see the effect of years, but I saw one the other week which I put in a canine 18 months ago, and there is no sign of flow, although the filling is polished by the bite.

In presenting these facts to-night, I do not claim to be putting forward anything original ; I merely wish to stimulate interest in the uses to which amalgam can be put in place of gold.

Guy's Hospital Employees' Association Biennial Dinner

THE First Biennial Dinner of the Association was held on Friday, November 21st, at the Florence Restaurant. This dinner was in the nature of an experiment, for until this year it has been an annual function and has always been held at the Bridge House Restaurant. We know from experience what anxiety such experiments cause those responsible, and we hasten to assure the organisers that, at any rate from our point of view, it was a tremendous success. There were some disadvantages over the previous arrangement, the most serious of which was that the company was rather too big for the room, a fact which was perhaps unduly emphasised by the lowness of the roof. Possibly, also, in travelling up West the Association may have lost the support of one or two who might have been unable to stand the pace. This, however, did not apply to our old friends Miss Brown, with whom the gentlemen hastened to drink a glass of wine, and Mr. Natty Wood, who was similarly honoured by the ladies.

After the toast of The King had been proposed by the President of the Association, Mr. H. L. Eason, we were regaled with cigars and a song. The toast of the Hospital and Schools was to have been proposed by Sir Maurice Craig, but his regretted absence was due to the fact that he had just undergone a serious operation. We were, however, relieved to listen to a telegram of good wishes from him, which Mr. Eason read to us, for it was evidence that he was making a satisfactory recovery. Professor Eyre proposed the toast in his place. Mr. Eason then explained that, in view of the exceptionally good acoustic arrangements of the hall, Mr. Mollison and not Mr. Layton had been asked to respond.

Mr. Mollison's convictions as to the indispensability of the employees of the hospital caused him to burst into verse, as follows :—

A is the Almoner with all-seeing eyes,
B 's Mr. Beal who summons to Guy's.
C for the Chairs wheeling patients along,
D for Dispenser and Drugs good and strong.
E is for Eason and also Effective,
F is for Furnace with heat its objective.
G is for Growls when the heat is not right,
H the expletive hurled into the night.
I is Illuminate ; but, if it won't,
Jimmy will put it right—see if he don't.
K is the Knife that the surgeon wields gaily.
L is the Lifting of many stone daily.
M is for Morphia to keep patients quiet,
N is the Nurse who looks after his diet.
O is the Oven which cooks him his dinner,
P for the Porter who wish he was thinner.
Q the Queer presents we all of us know,
R is for Rubbish that somehow must go.
S is the Spirit that unites us at Guy's,
T is the Team-work we all of us prize.
U is for You who must do your bit,
V are the Visitors who round the beds flit.
W that wonderful place called the Works,
X the EXpense that all round us lurks.
Y 's for the Year that's moving along,
May Guy's reach its Zenith and keep going strong !

Mr. Mollison then told us of the commercial efficiency of a certain American clinic, which owned not only the town in which it stood, but also all the hearses, the church and the graveyard, and had even started to grow its own flowers. We were secretly of the opinion that Guy's was rapidly reaching the same degree of efficiency, for we saw sitting not far away from us the jovial figure and rubicund countenance of our old friend Mr. Mummery, the Hospital undertaker.

Professor T. B. Johnston, the Dean, responded for the Schools. He had been told that it would be another Bovril winter, but he assured us that Miss Huggett would keep the home fires burning again this winter with as much determination as she had done during the summer !

Mr. Eason proposed the health of the Employees' Association, and assured us that if all the medical and surgical staff, and even he himself were to disappear in the night, nothing very much would happen, and the Governors would remain quite unperturbed ; but if Jimmy were to go on strike, or if one got no answer to one's frantic telephone call for Night Emergencies, the Hospital would be unable to carry on. He read to us extracts from the private notebook of the Superintendent of nearly 200 years ago, and it became clear that, though the eyes of a superintendent might often appear blind, there is nothing much he misses.

The toast was responded to by Mr. Currie, who was this year's chairman, after which Mrs. Eason kindly presented the prizes won during the year. We must congratulate Miss Goodall for carrying off once again that large tennis cup.

The Matron, in proposing the toast of the Visitors, described some very peculiar visitors she had met, ranging from a little old man who brought her six monkeys to an irate taxi-driver who demanded a £9 fare for a taxi she had never employed.

Mr. Martin Millar, the solicitor to the Hospital, replied to the toast.

The speeches were interspersed with an excellent musical entertainment, and we rose from the table to go home having enjoyed a thoroughly pleasant evening.

REGULAR DINER.

Correspondence

Invalid Children's Aid Association

(Bermondsey and Rotherhithe Branch)

To the Editor of the GAZETTE

SIR,—The officials of the Hay's Wharf Boxing Club are most kindly getting up a Tournament on December 5th next in the Bermondsey Town Hall on behalf of our local branch of the Children's Invalid Aid Association, of which I am Chairman.

Although I know little of boxing contests, I understand that the tournament is certain to prove an excellent one, and there is the additional and great attraction that Major John Hay Beith (" Ian Hay "), who, as your readers know, is one of our Governors at Guy's, has consented to distribute the prizes.

Notices about the tournament are already posted in the hospital and school. My committee are anxious to give all the takings to our branch of the Association, and have decided so to do. Hence it is essential to collect beforehand a sum of £30 to defray the cost of prizes and other small expenses, as otherwise we are unable to obtain exemption from the Entertainment Tax ; in so poor a district every penny is needed.

The value of the prizes is fixed for each class of boxing under the rules of the Amateur Boxing Association, and outside the amount required for

this purpose we have nothing to pay except for printing—quite a small item—and this is due to the kindness of the Hay's Wharf Boxing Club's officials, who are voluntarily undertaking all the work of organization and the arrangements of the entries. Therefore if any of your readers will send me a subscription, large or small, towards our fund, and/or buy tickets for the tournament, my committee will be most grateful, for all will agree that money could hardly be spent in a better cause.

Yours, etc.,

JOHN FAWCETT.

66, Wimpole Street,
W.1.

Sir Thomas Barlow's Christmas Appeal

To the Editor of the GAZETTE

SIR,—Next month we shall be preparing to give, as is our usual custom, a Christmas Gift of 30s. to each of our Annuitants and to some of the most necessitous of the Grantees. These gifts are looked forward to by many.

Some of the regular recipients are blind, others are deaf, and many of them are old and infirm; all are facing the hardships of poverty.

Each year the number on our books increases, and we need no less a sum than £550 this year if no one is to be left out.

I appeal in plenty of time before Christmas because we urgently need the money.

Will any reader who has not yet contributed please make his first Christmas gift to this cause and thereby help a fallen colleague, or his widow or orphan?

If he cannot give a large donation, may I ask him not to disregard my appeal, but to send any sum, however small, to the Treasurer, Royal Medical Benevolent Fund, 11, Chandos Street, Cavendish Square, W.1.

Yours, etc.,

THOMAS BARLOW,
President.

11, Chandos Street,
Cavendish Square, W.1.

The Fives Court

To the Editor of the GAZETTE

SIR,—Your correspondent "Student" is under a misapprehension. The authorities of the hospital did not "until a few months ago allow students, house officers and others the free use of the Fives Court."

The Fives Court was reconstructed, renovated and re-roofed by the Governors in 1923 at a cost of £200, and was lighted at a cost of approximately £67, the money being provided from the general funds of the hospital. The court is also cleaned and renovated at the hospital's expense.

The court is not under the control of the Clubs' Union and is not financed by the Clubs' Union.

The Governors of the hospital, however, decided that all members of the Clubs' Union may use the Fives Court, and that if they desire to use it out of daylight hours they must pay for the lighting, as it is not desirable that such a charge should fall upon the general funds of the hospital.

The lamps in the court use a great deal of electricity, and though the actual cost may not be as much as 1s. per hour, persons who use the court must be well aware that a shilling in the meter does in fact light the court for considerably longer than an hour, and light is often available without the necessity of putting in another shilling.

If "Student" has been unfortunate in this respect, other luckier persons have probably found that they can get their hour's play without any charge for light, as somebody else has paid for them.

It is quite possible, of course, that for considerable periods during the last six years players have been able to get their light for the court for nothing, as the box has constantly been broken open and it has therefore been possible to put in the shilling, get the light, and take the shilling out again.

Needless to say, this practice is not encouraged by the Governors, and steps have now been taken to ensure that the light shall be paid for.

Yours, etc.,

HERBERT L. EASON,
Superintendent.

Guy's Hospital,
S.E.1.

Mental Disease—Erratum

To the Editor of the GAZETTE

SIR,—Lest I be suspected of homœopathic tendencies, may I point out that in my clinical lecture which you so kindly published last week the dosage of atropine is misprinted as 1/1000. It should, of course, be 1/100.

Yours, etc.,

R. D. GILLESPIE.

25, Upper Wimpole Street,
W.1.

Simple Points in Dental Diagnosis

R. Cutler, Esq., M.R.C.S., L.D.S.

"A CASE correctly diagnosed is more than half cured" is an old medical maxim, and even the keen and capable dental student might do well to remember that success in practice depends, not so much upon actual manipulative dexterity and operative skill, but rather upon a balanced judgment and a discretion whereby the best use is made of these qualities.

Short notes of the following two cases provide quite a good example of the need for the unremitting care which leads to the correct diagnosis and, logically, to the correct treatment.

Miss C. R. attended with a history of a dull and increasing pain in the left lower molar region, having then become sufficiently severe to keep her awake at night. On examination the first left lower molar was seen to be missing, and regarding this there was a story of a successful, though desperately difficult extraction some considerable time before. The second molar was a big well-developed tooth and had a large well-finished occlusal gold inlay: the wisdom tooth was barely erupted, the posterior aspect being still covered, though largely by a gum flap rather than bone, while it seemed that some degree of impaction existed. On the lower right side the three molars were all present and vital, the wisdom tooth being uncovered and in a fair functional position. Reverting to the lower left side, no marked tenderness of either molar could be elicited, while the probe failed to detect any interstitial or occlusal cavities; there was, however, considerable congestion of the gum flap in relation to the wisdom tooth.

In this case three possible diagnoses suggested themselves:—

(1) Impaction of the wisdom tooth.
(2) "Gum flap" infection.
(3) Some variety of hidden caries.

The first seemed the most likely, and as such, presented a serious outlook, in view of the previous difficulty in extraction, and of the fact that the patient was anxious to undertake a hundred mile car journey two days later. The possibility of a serious extraction was mentioned, an intra-oral X-ray film taken, and the gum flap thoroughly irrigated and cleaned.

The next day there was no improvement the pain if anything having become worse, but fortunately the X-ray film held the key to the problem: there was a marked opacity on the negative beneath the gold inlay (inserted in Australia five years before) indicating the presence of secondary caries, while there was no real impaction of the semi-erupted wisdom tooth. Without delay the inlay was cut out, extensive caries removed and a sedative dressing applied, and since this time there has been complete freedom from pain.

As it is quite conceivable that in such a case an attempt might have been made to remove the wisdom tooth—with disastrous results—it would be instructive to consider what were the signposts to a correct diagnosis had X-ray facilities not been available.

Firstly, that on the right side *the wisdom had erupted uneventfully although all the molar teeth were present*, while on the left side the first molar was missing so that the possibility of successful eruption was much greater; and secondly, that the pain was dull and boring rather than neuralgic, this latter being the diagnostic pain in the minor impactions.

Mr. W. O'H. attended with a swelling in the right mandibular region with a ten days' history of increasing pain, this having subsided as soon as the swelling appeared. He was very anxious for immediate treatment as he was hoping to depart for a holiday on the Broads in two days' time. On examining the right lower mandible all the molars were seen to be present, the wisdom being badly broken down and impacted while the surrounding tissues were markedly congested. In the right maxilla all the molars were present, a mesial interstitial cavity being seen in the first molar. Again the possibility of a serious extraction was mentioned, *i.e.*, the lower wisdom tooth, but as the patient emphasised that the pain had started in the upper jaw, the walls of the first upper molar were broken down with a chisel, a moribund but not purulent nerve being exposed. As preliminary treatment this tooth was at once removed under gas anæsthesia.

There was no purulent discharge, but the mandibular swelling rapidly subsided without further operative intervention; obviously the maxillary infection had tracked down the tissue planes to the mandibular region. The pointers to a correct diagnosis in this case were firstly the patient's story (always to be carefully but critically considered), and secondly the fact that there was no marked tenderness when pressure was applied by the finger and thumb, in and outside the mouth, on the crown of the lower wisdom tooth.

The busy practitioner is called upon to treat cases such as these almost every day, so that quite early in his career the dental student will do well to cultivate a habit of critical enquiry and meticulous care in his investigation of clinical problems, for without it his purely technical abilities may prove of little avail.

Reviews

Koby's Slit Lamp Microscopy of the Living Eye. Translated by GOULDEN and HARRIS. Published by Messrs. J. & A. Churchill.

MR. GOULDEN and Mrs. Harris have again performed a valuable service to ophthalmologists by rendering the second edition of Dr. Koby's work available in English.

It is five years since the previous edition appeared in this country. Much new information has accumulated in the interval, but the author has kept well abreast of the times as is evident from the extensive additions made throughout the text. Many new illustrations have been included, thus rectifying a deficiency noticeable in the first edition.

A comprehensive bibliography is placed next to the index, and the abbreviations are clearly explained.

Dr. Koby has provided an excellent guide and a valuable book of reference on the Microscopy of the Living Eye.

Guy's Hospital Reports. Vol. 80, No. 3, July, 1930

IN the opening paper by Dr. Witts, he describes the condition which he names "simple achlorhydric anæmia." Although other writers have described similar cases, their existence as a clinical entity has not hitherto been stressed, and the text-books contain no reference to them. A large proportion of unclassified secondary anæmias admitted to the hospital for treatment appear to belong to this group. The satisfactory results of massive iron therapy and the failure of liver in producing an improvement is a distinctive feature in the differentiation from Addison's Anæmia. The relationship between simple achlorhydric anæmia to the Plummer-Vinson Syndrome and Addison's Anæmia is discussed and transitional forms are described.

Mr. Bromley in an instructive article describes several cases of small intestine obstruction. A case of retro-peritoneal hernia is described by Mr. Philip Turner and Mr. B. G. Schofield. The clinical varieties and the pathology of the condition are then discussed with reference to the literature. A further case of duodenal retro-peritoneal hernia is described by Dr. Venables.

Mr. Thompson concludes his report on cases of urinary lithiasis occurring during the years 1910 to 1929 inclusive. Different varieties of vesical calculi are classified; cases of prostatic calculi are described. The paper concludes with a summary of conclusions based on cases cited in this and the previous communication.

An extremely interesting case of megalo-uretus due to achalasia of the uretero-vesical sphincter is described by Dr. Hurst and Mr. Gaymer-Jones, and other previously recorded cases are cited. The paper is illustrated by some very excellent reproductions of pyelograms. The pathology of the condition is brought into line with achalasia of the cardia and mega-colon.

Mr. Irving contributes a short paper on the permeability of the kidney cell to glucose. As a result of his beautifully simple and clear-cut experiment he concludes that the kidney cell is not permeable to glucose and that it is broken down (as previously shown) by a factor situated at the cell surface.

Mr. Gibberd gives a very thorough survey of the work carried out at the Guy's Hospital Maternity Department during 1929. The dexterity with which he extends useful information and interesting conclusions from what would appear to be dull statistics compels one's admiration. His paper is capable of arousing the interest even of those not obstetrically minded.

Finally, Mr. H. G. Close includes a note on the hospital incidence of some diseases. It is gratifying to learn that the cases of acute rheumatism admitted to Guy's Hospital have dropped from 148 per annum in 1910-1914, to 33 per annum in the period 1921-1925, but we feel that some special factor must have been left out of account. At none of the other three hospitals whose figures are quoted is the fall shown at all approaching this magnitude.

Guy's Hospital Gazette

(ESTABLISHED 1872)

A Journal of Hospital News, Medicine, Surgery and Dentistry.

Published on Alternate Saturdays. Price 9d.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Sport

Rugby

Guy's v. Coventry

AT Honor Oak Park on Saturday, November 8th, Guy's more than atoned for their heavy defeat by Cambridge by giving a brilliant display, which gave them a convincing victory over Coventry by 4 placed goals, a dropped goal, a penalty goal and 2 tries (33 points) to 2 placed goals, a dropped goal and a try (17 points). After their indifferent efforts in the two previous matches, it was a good tonic for the large crowd who turned up, to see the Hospital back to something like the form which made them famous a few years ago.

The result was remarkable in a way, because the Hospital forwards, although splendid in the loose, lost the ball repeatedly in the set-scrums, and it reflects great credit on the back division who rose to the occasion magnificently and carried out many passing movements with surprising skill and accuracy.

Fichardt, at right centre, was outstanding for Guy's, and it was the result of his splendid interceptions and strong running which led to four of the tries scored for the Hospital. Johnson and Ashdown both gave improved displays, whilst Windsor Lewis and Giesen were constantly seeking weak avenues in the visitors' defence, which resulted in many openings being initiated.

Hogbin was excellent, and, in addition to his work in the loose, converted four placed goals and a penalty goal, two or three of these from very difficult angles.

The opening was just as exciting as the finish, as from the kick-off Johnson raced along the touch line and was only thrown into touch near the corner flag, and a few seconds later Windsor Lewis missed a drop at goal by the narrowest of margins.

However, Coventry were the first to score. By fine forward rushes play was carried to Guy's 25, when Fichardt picked up a cross kick and sent out a difficult pass to Ashdown, who unfortunately missed it, and Bonham, seizing the opportunity, gathered and raced over for a try in the corner, which he himself converted with a fine kick.

Guy's soon reduced the deficit following a great run by Giesen, who, after drawing the opposition, sent Johnson along the wing. The latter managed to shake off two tackles and eventually scored in the corner for an unconverted try.

The Coventry forwards were showing plenty of dash at this stage, and, with man for man heavier than our pack, they were able to sweep down the field to Guy's 25. Coventry started a round of passing, but Fichardt intercepted a stray pass, ran for three-quarters of the length of the field, and, deceiving the full-back, scored a magnificent try between the posts, which Hogbin converted.

Following a scrum near mid-field, the ball was sent to Mayo, who, running strongly through the centre, slipped past W. Lewis and scored an easy try, which Bonham converted.

With the visitors leading by two points the excitement ran high, when another fine bout of passing between Giesen and Johnson ended when the latter was tackled on the line. However, the ball was punted to Giesen, who from a distance of 40 yards dropped a very fine goal, thus giving Guy's the lead again.

The visitors made determined efforts to equalise, and, following two forward rushes, compelled W. Lewis to touch down. A minute or two later West secured in a line out near the corner and hurled himself over for a try, which was not converted.

Before half-time Ashdown made a splendid individual run, but, having no support, was hauled down in the visitors' 25.

The second half was full of excitement, and some extremely good football was seen. Coventry went off with a dashing forward raid and Gascoigne rushed up and dropped an excellent goal.

For a time the visitors continued to have the better of the argument, but could not press home their advantage, and after the Guy's backs had participated in two or three brilliant bouts of passing, one finally ended by Fichardt again racing through the defence. He had an easy opportunity to touch down, but, thinking he had left all the opposition behind, he eased up near the posts, and Harriman, who had been unobserved, caught up to Fichardt, pushed him violently in the back, and Fichardt had the mortification of seeing the ball roll from his grasp. Luckily, O'Shea was at hand and won the race with two of the visitors for the touch down, which Hogbin converted.

With the scores level, the whole Guy's side played dazzling football, and attacked continuously for the rest of the game. First a perfect round of passing initiated by Windsor Lewis enabled Ashdown to reach the 25, where the visitors were penalised and Hogbin kicked a great goal.

This was quickly followed by a splendid individual effort by Giesen, who drew the opposition and, when faced by the full-back, punted forward and Fichardt secured the touch down, which Hogbin converted.

Another very fine effort by Fichardt enabled him to go through on his own and register a try, which was too far out for Hogbin to convert.

The climax came a minute or two from time, when the whole of the back division participated in a superb round of passing, which Ashdown crowned by an equally fine run behind the posts after shaking off two opponents. Hogbin completed the movement by converting the try, when the whistle for no side sounded immediately after.

In fairness to the visitors it must be recorded that they lost the services of Wilkinson, their wing forward, after 20 minutes' play, but, even with seven men, the pack were too good for the Hospital.

Team.—W. Lewis ; A. G. Johnson, J. E. Giesen, T. Fichardt, D. E. Ashdown ; Windsor H. Lewis, R. J. Eustace ; R. G. Knight, J. P. O'Shea, L. B. Hilton, I. G. Robin, G. F. Lashmore, J. R. F. Popplewell, T. Morgan, R. A. P. Hogbin.

Guy's v. Old Leysians

AT Honor Oak Park on Saturday, November 15th, Guy's were again successful when they defeated the Old Leysians by a placed goal, a dropped goal and a try (12 points) to a placed goal (5 points).

The conditions were depressing, as a steady drizzle continued throughout the game, making the ground very heavy and muddy.

However, in spite of the slippery state of the ground, a good game was seen and the greasy ball handled with a fair degree of accuracy.

Guy's kicked off against the wind and immediately made ground to the Old Boys' goal line, when Morel sent them back with a huge penalty kick which found touch in the Hospital's 25.

A good dribble by Johnson put Guy's on the offensive, and Windsor Lewis made a good effort to drop a goal. Another fine dribble by Hogbin brought Guy's close to the line, and this time Johnson had a drop at goal and the Old Leysians touched down.

Following fine work by the Hospital forwards, Guy's took the lead when Morgan managed to touch down, but Hogbin was unable to convert.

The forwards were playing well, and another raid nearly led to a score, but the defence of the visitors was particularly good, and eventually they made a brief excursion to the Guy's 25. Giesen picked up cleverly on the goal line and, following up a lengthy punt, caught the visitors' full-back in possession.

The ball came out to Windsor Lewis, a nice opening was created for Ashdown. The latter made a strong run to the visitors' 25 before he was tackled, and Fichardt a minute or so later missed a drop at goal.

The Old Boys then secured a lucky try, when another long kick by Morel, which found Thomas out of position, was followed up by Kilner, who won the race for the touch-down, which Macpherson converted.

In the second half, Guy's had the aid of the wind, and, although they pressed continuously, it was a long time before they were able to score. The tackling of the visitors was very accurate, and they gave nothing away.

From the kick-off Hogbin secured a mark and punted to near the corner flag, but the Old Boys sent Guy's back when Johnson picked up and ran through the defence. When faced by the full-back he passed to Fichardt, who was promptly tackled and brought down.

For some time Guy's set up a hot pressure, and Fichardt, Windsor Lewis, and Ashdown all made attempts to get through.

In one of the attacks Giesen was injured, and later occupied the position at full-back.

A great effort by the forwards was eventually rewarded when Morgan forced his way over the line and touched down near the posts for Hogbin to add the goal points.

Guy's made several attempts to increase their lead, but no further scoring took place until near the end, when Thomas passed back to Windsor Lewis and the latter dropped a perfect goal from 30 yards out.

Team.—I. K. Thomas; A. G. Johnson, T. Fichardt, J. E. Giesen, D. E. Ashdown ; Windsor H. Lewis, R. J. Eustace ; R. G. Knight, J. P. O'Shea, L. B. Hilton, I. G. Robin, T. Morgan, J. A. T. Rowlett, G. F. Lashmore, R. A. P. Hogbin.

Golf

IN the semi-final against Bart.'s, played at Oxley on Wednesday, November 12th, Guy's were successful by the narrow margin of 7 matches to 5.

In the foursomes in the morning two matches were won by either team, but the Hospital secured a lead by 5 matches to 3 in the singles in the afternoon.

Fourth place in the team, previously held by C. D. Malone, was ably filled by H. A. Weighell, who played an extremely good game and was successful in both foursomes and singles.

W. Lewis is to be congratulated on a fine return of 80 gross in defeating C. M. Carr, of Bart.'s.

The team was at a great disadvantage, playing on an entirely unknown and difficult course, and the victory gained greatly strengthens our prospects of winning the Cup, which has so long eluded us.

Results :—

FOURSOMES

Guy's		*Bart.'s*		
P. H. Lomax W. Lewis	0	Carr Wedd	1	1 up
H. B. Thornton H. Cameron	0	Grooves Hole	1	2 up
H. A. Weighell G. O. Jelly	1 at 19th	Cutlark Evans	0	
M. W. Pilcher W. C. Kendrick	1 4 & 3	Wilson White	0	
	2		2	

SINGLES

W. Lewis	1 2 up	Carr	0	
H. Cameron	0	Wedd	1	5 & 4
H. B. Thornton	1 2 up	Evans	0	
H. A. Weighell	1 2 up	Cutlark	0	
M. W. Pilcher	1 2 & 1	Hole	0	
P. H. Lomax	0	Grooves	1	4 & 3
W. C. Kendrick	1 3 & 1	Wilson	0	
G. O. Jelly	0	White	1	1 up
	5		3	

Rowing

THE Annual General Meeting of the Hospital Rowing Club was held in the College on Thursday, October 30th, Mr. Davies-Colley n the Chair.

The Officers for the ensuing season were elected as follows :—

President.—R. Davies-Colley, Esq., C.M.G., M.Ch. (re-elected).

Vice-Presidents.—W. M. Mollison, Esq., C.B.E., F.R.C.S. ; J. H. Ryffel, Esq., B.Ch. ; A. J. McNair, Esq., M.B., B.Ch. (all re-elected).

Captain.—G. M. Curtois.

Hon. Secretary.—J. B. Spearman.

Committee.—G. G. Ellis, J. W. Wheatley, G. A. Miller.

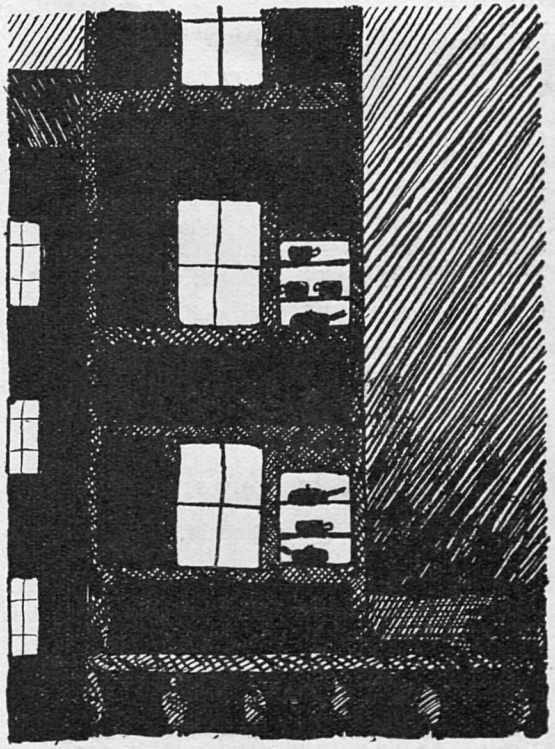
The expenditure for 1929-30 season showed a saving of £13 odd on that of the previous season.

In addition to the Inter-Hospital Regatta it is hoped again to enter a crew for the Head of the River Race, Guy's being the first and only hospital to have entered for this race. We have received also a challenge from Reading University to race at Henley in March.

Rowing practice commenced on November 1st, and there is still room for more oarsmen of experience.

J. B. SPEARMAN,

Hon. Sec.



BRIGHTER LONDON

or

Recent Improvements in the Medical Wards as seen from the College.

Hospital Information, etc.

Pass List

L.D.S., R.C.S. ENG.

FINAL EXAMINATION.

November, 1930.

PART I.

General Surgery.

R. W. F. Brotherton
G. B. Brummitt
F. W. Clare
L. H. G. Cummings
J. E. Darlow
B. Deggots
J. C. Dominick
R. L. Etheridge
K. C. Gebbie
D. W. Goodman
R. J. G. Grewcock
L. P. Harte
J. E. Ilott
C. V. Kark
S. J. G. Knott
F. J. Mardon
W. L. Mountain
S. R. Peatfield
L. H. Smith
J. H. Stevens
J. H. Timpson
R. W. Tuck
D. J. Wandless
K. W. Whitworth
A. E. Williamson
E. V. B. Widdowson

PART II.

Dental Surgery.†

C. G. W. Brown
S. C. S. Brown
H. D. Cockram
G. M. Davies
B. Deggots
J. H. R. Gaffney
F. J. Goldsworthy
C. V. Harries
C. W. Harrison
C. H. Hole
J. E. Ilott
M. McDowall
E. A. Mayston
T. D. Popplewell
C. P. B. Reed
N. G. Straschun
R. A. Sykes
K. W. Whitworth

† All students passing in Dental Surgery are qualified.

Papers by Guy's Men

F. Bach and C. Worster Drought. Inter-relation of neurosyphilis and cardiovascular syphilis. *Lancet*, 1930, ii, 1113.

D. Kathleen Brown. Vulvo-vaginitis in children. *Brit. Jour. V.D.*, vi, 285.

A. Bulleid. Dental sepsis and its relationship to mental disease. *Brit. Dent. J.*, li, 1221.

R. D. Gillespie. The psychology and psychopathology of childhood. *B.M.J.*, 1930, ii, 807.

J. Lewin. The nose and throat in relation to orbital and ocular disease. *B.M.J.*, 1930, ii, 820.

W. H. Ogilvie. (1) Injury to brachial plexus; (2) Congenital abnormalities of the hands; (3) ? Bipartite scaphoids. *Proc. R.S.M.*, 1930, xxiv, 38, 40.

R. H. J. Swan. Stricture of the urethra. *Brit. Jour. V.D.*, vi, 267.

A. R. Thompson. Notes on the perineal muscles and urethra in cases of epispadias and ectopia vesicæ. *J. Anat.*, lxv, 161.

J. F. Venables. Anorexia nervosa. *Clin. J.*, lix, 544.

Appointment

C. P. Blacker, M.B., M.R.C.P., General Secretary of the Eugenics Society.

Change of Address

B. G. Scholefield, F.R.C.S., 12, Northbrook Road, Lee, S.E.13. *Lee Green* 5200.

C. Skinner, L.M.S.S.A., L.D.S., R.C.S. Eng., Emerson Street, Napier, New Zealand.

Birth

SHELTON-ROBERTS—On November 15th, 1930, at Gwyddfor, Penygroes, to the wife of Dr. E. Shelton-Roberts (Katie), a daughter. Both well.

Marriages

FORSYTH-DRUCE—On December 29th, 1928, at All Saints' Church, Brixham, Devon, by the Rev. H. J. Hawkins (sometime chaplain at Guy's Hospital), M. C. Stuart Forsyth, of Srinagar, Kashmir, to Etta Kathleen, youngest daughter of the late Mr. and Mrs. Druce, of Oxford.

SKINNER-COLLINS—On November 1st, 1930, at Southwark Cathedral, Clarence Skinner, L.M.S.S.A., L.D.S. Eng., son of the late Mr. and Mrs. J. Skinner, of Napier, New Zealand, to Hilda Mary, youngest daughter of Mrs. Collins and the late Mr. J. H. Collins, of Hill House, Enfield.

Death

HICKS—Mathilde, wife of H. T. Hicks, F.R.C.S. (Eng.), 56, Friar Gate, Derby, after a long illness, on November 20th, 1930.

EDS. { P. M. F. B.
P. V. R.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV — *13th December* 1930 — *Number* 1106

PASSIM

THE profession of nursing is one to be admired by all, for those who would succeed must bear with a great deal of drudgery, long hours and little leisure, for but small remuneration. Withal they must have a good education and a real love for their work. The present high status of nursing in our own and other large voluntary hospitals is only a comparatively recent achievement, and if the position of nursing elsewhere is not yet such as we would have, it is hardly to be wondered at.

In a recent letter to the daily press, Dr. Ethner Carling, of Peppard Common Sanatorium, proposes that an inquiry should be made on this score. We believe all medical men, in common with nurses, will welcome the prompt move the *Lancet* has made to forward such inquiry; the "*Lancet* Commission" has been formed with Lord Crawford and Balcarres as president, to inquire into the reasons for the failure of nursing to attract suitable women and the consequent shortage of entries into the profession. The problem they have to face is a difficult one, for it is the woman with a good education that is wanted, not only in the voluntary hospitals, but throughout the realm of nursing; possibly the opening is not yet realised by many parents. Again we can understand a mother's objection to contact with tuberculous patients even though they may agree to work amongst other diseases, and for our part we feel their objection is sound and that nurses in sanatoria should not be taken from among the young.

The *Lancet* Commission is well chosen, for its members are representative of different spheres of activity, and will, we hope, succeed in their purpose and be the means of introducing such advances as will place the profession of nursing throughout the country on the footing to which it has a right.

Any suggestions that may be offered should be communicated to the Honorary Secretary, The *Lancet* Offices, 7, Adam Street, Adelphi, London, W.C.

THE Residents' Ball, it is announced, will be held on Friday, January 16th, at Grosvenor House, starting at 9.30 p.m. Mrs. Chapple has kindly consented to act as hostess on this occasion.

We would point out that this date is the eve of the international Rugby match, England *v.* Wales, and as such should be most convenient for Guy's men out of town who intend seeing this game. Further, the support of all men at Guy's, not only residents, is welcome.

As last year, the double ticket will be two guineas. A further announcement will be made in the next issue, stating the names of the Ball committee. It is more than probable, we think, that last year's success will be repeated.

OUR heartiest congratulations are due to Mr. D. W. C. Northfield, who in the recent Final Examination for the M.B., B.S. (Lond.) obtained the University Gold Medal; he is the first Guy's man so to distinguish himself since Mr. W. R. Spurrell four years ago.

We also congratulate Sister Gration on being awarded a distinction in the examination for the Diploma of Nursing; this is the highest academic honour obtainable.

THOSE who were invited to the Sisters' Dance on Wednesday, 3rd December, and went, will agree that the said ladies excelled themselves in the entertainment of their guests; the dance went with a swing, and the whole evening was thoroughly enjoyed, we know, by everybody. With those who were invited, but did not go, being unable to "trip a measure" or for other reasons, we condole in their misfortune.

THE Niggers, after the usual early vicissitudes, may now be heard nightly training their voices in the Medical School. We can only wonder that "Com," like the starlings in the park, has not left for other climes.

WE would like to draw attention to the Landon Tea Fund; this famous meal will again be held on Christmas Day in the Out-Patients' Hall, and the committee will be very grateful for any contribution either in the shape of money or of toys. Dolls, we believe, are especially acceptable in the eyes of the Borough child, and we ask that a real effort should be made to assist the organisers, for no one, who sees the Surgery doors besieged every evening by children clamouring to have their names taken, can doubt that this occasion does form a really bright spot in their generally drab lives. Contributions should be sent either to Sister Out-Patients or to the Secretary of the Landon Tea Fund Committee.

As a result of a collection at the Apollo Theatre on Monday, November 24th, £33 13*s.* 10*d.* has been handed to the Hospital's funds.

The Future of Surgery

A Clinical Lecture by Dr. A. F. Hurst

GENTLEMEN,—I asked my Clinicals yesterday to choose a subject for to-day's lecture. They suggested that, as the distinguished surgeon who gave the opening address of the session spoke on "The Future of Medicine," it would be interesting to hear the views of a physician on "The Future of Surgery."

It would appear from what Lord Moynihan said that the future of medicine will be in the hands of the surgeon. My own feeling is that the future of surgery will be in the hands of the general practitioner, whose increasing skill in diagnosis and non-operative treatment will deprive the majority of surgeons of their living.

It will be easier to forecast the future of abdominal surgery if we first look back on the progress of our knowledge of diseases of the stomach, intestines and gall-bladder in the last 25 years. I remember one evening in 1907 walking up Harley Street with our present Senior Surgeon and discussing a paper which had just been published by Mr. Moynihan on duodenal ulcer. We agreed that it must be founded on error, as it seemed inconceivable that a disease, which had up to that time never been diagnosed at this hospital and which was regarded everywhere but in Leeds as a rarity occasionally met with in the post-mortem room, could really have been masquerading under the guise of the familiar acid dyspepsia of the medical out-patient department. A few months later I visited Leeds and saw Mr. Moynihan operate on eight cases which he had diagnosed as duodenal ulcer, in seven of which he was able to demonstrate to me a definite lesion in the first part of the duodenum. The demonstration was convincing, but in a clinical lecture which I gave here shortly afterwards I said that although it was now clear that duodenal ulcer was really a common disease, which could often be diagnosed from the symptoms alone, yet it was equally clear that some treatment less radical than gastro-jejunostomy, but more radical than a bottle of Mist. Gent. et Sodæ, would eventually be found for it. Nothing in the years which have elapsed since then has altered my opinion, and in spite of what Lord Moynihan said in his address I know that at heart he agrees with me that really adequate medical treatment is preferable to surgery in the vast majority of cases.

Twenty-five years ago most physicians thought they could diagnose gastric ulcer. Sir William Hale-White in 1901 showed that they could not. He pointed out the curious fact that although the epigastric pain after meals with vomiting and hæmatemesis which occurred so frequently among the chlorotic young women of the period was

supposed to be due to gastric ulcer, yet in the post-mortem room the disease was very rarely seen in young women, but was comparatively common in men of middle age. He contended that the chlorotic girls could not really be suffering from a chronic gastric ulcer. Observations during operations soon confirmed this, and it gradually became recognised that gastric ulcer was much less common than duodenal ulcer and differed from it in that a diagnosis could be made with much less confidence from the symptoms and signs alone.

The new ideas about the relative frequency, the age and sex incidence, and the symptoms of gastric and duodenal ulcer slowly gained acceptance in England and America, but were still regarded with profound scepticism in France and Germany as late as 1914.

When I was house physician in 1905 the X-ray examination of the alimentary canal had been practised in cats, but never in man, the giving of a one-hour test meal was a very unusual event, and the investigation of stools for occult blood was unknown in England. The last ten years have witnessed a remarkable revolution in our methods of diagnosis in gastric and intestinal disorders, and it is now possible to diagnose a gastric or duodenal ulcer with almost complete certainty. For nearly ten years I have been unwilling to make such a diagnosis without direct radiological evidence of the presence of the ulcer. A fractional test meal gives information about the functional condition of the stomach, which is often a useful guide to treatment. The presence of occult blood in the stools shows that the ulcer is active, and its gradual disappearance under treatment is a valuable indication of the rate of healing. With our present knowledge of the symptoms of gastric and duodenal ulcer and with these new aids to their recognition one might expect that patients would come under observation at an early stage of the disease. But the average duration of symptoms of some 300 private patients who have come to me with a gastric or duodenal ulcer since 1921 was no less than ten years. As a result of this, complications such as hour-glass stomach, pyloric obstruction and deep penetration into the pancreas occur far too frequently, and in other cases medical treatment, though nearly always ultimately successful, has often to be prolonged for a period which taxes the endurance of the patient to the uttermost.

We owe much of our knowledge of gastric and duodenal ulcers to the work of surgeons in the last twenty-five years. It is natural that much of the treatment should have fallen into their hands. But what of the future? It is to you, the general practitioners of the future, that we must look for as great a change in practice in the next quarter of a century as that which has been witnessed since the beginning of the present century. If we, your teachers, do our duty, you will learn to recognise the earliest symptoms pointing to the possible presence of an ulcer. You will then with the aid of the expert radiologist and perhaps the bio-chemist, though a test-meal and the examination for occult blood in the stools should not be beyond the powers of the average practitioner, decide whether your suspicions are justified. If an ulcer is present you will give your patient adequate treatment, not the parody of treatment which is given in the vast majority of cases to-day, such treatment as that mentioned by Lord Moynihan, which, though a new name is attached to it, is merely the revival of an old and discredited method. You will keep your patient in bed on a strict diet with whatever drugs may be necessary until all pain, tenderness and rigidity have gone, the last trace of occult blood has disappeared from the stools, and the X-rays no longer give evidence of an active ulcer. This means never less than a month and often five, six or more weeks. You will then have all foci of infection in the mouth, throat and nose thoroughly treated, and you will finally give the patient instructions as to the regime he must follow for the rest of his life, if he, the unfortunate owner of the ulcer diathesis, is to remain permanently free from symptoms.

From this it follows that the future of the surgery of gastric and duodenal ulcer is its prevention by early diagnosis and adequate treatment by the general practitioner. There will still be a few cases of perforation occurring in patients with such a short history or such slight indigestion that they have never sought advice for it. But operations for uncomplicated ulcers, which are in any case rarely justifiable in the light of our present knowledge, and for such late complications as hour-glass contraction and pyloric obstruction, will no longer be performed. Gastro-jejunal and jejunal ulcers, which occur in at least 10 per cent. of cases of gastro-jejunostomy performed for duodenal ulcer, and of which I saw no fewer than 43 cases among private patients in the same period as 36 gastric and 137 duodenal ulcers, will become a forgotten disease. The mutilating operation of partial gastrectomy for gastric ulcer will also fall into disuse, and the steadily increasing number of cases of jejunal ulcer following this operation if free acid is still present, and of severe anæmia if it is not, will no longer be the price which may have to be paid for the cure of the primary disease. For some years I have had to recommend the undoing of a gastro-jejunostomy almost as often as its performance, but in these happy days to come, when the last unnecessary gastro-jejunostomy has

been undone, "the abolition of surgery" which Mr. A. J. Walton has stated will be "the chief aim and object of the surgeon of the future," will, so far as gastric and duodenal ulcers are concerned, be accomplished.

The treatment of carcinoma of the stomach might be expected to remain in the hands of the surgeons. Improved methods of diagnosis should make it possible to recognise many cases far earlier than they are recognised to-day. It is a terrible fact that even among private patients the average duration of symptoms when they first come under my observation is no less than one year. Here again much depends upon the general practitioner of the future; he should recognise that indigestion of any kind or loss of appetite occurring for the first time in a man of forty or more, which does not respond to simple treatment within a week, requires further investigation. Such investigation would make it possible for the surgeon to operate generally at a much earlier stage than is common to-day. But even so the results in most cases would be unsatisfactory, as the early stages of carcinoma of the stomach are very often completely latent, and secondary deposits may develop before the primary disease can be recognised. But the next twenty-five years will, I hope, see something infinitely preferable to the early diagnosis of carcinoma of the stomach; it will see its prevention. I am firmly convinced that cancer never develops in a healthy stomach. In the 20 per cent. of cases with free acid in the gastric contents there is generally a long history pointing to the presence of a gastric ulcer, and the pathological investigations of Professor Stewart have shown conclusively that at least 6 per cent. of gastric ulcers become malignant and that at least 16 per cent. of growths of the stomach are secondary to chronic gastric ulcer. Fortunately, carcinoma never develops from the scar of a healed ulcer, so that the early diagnosis and treatment of gastric ulcer, of which I have already spoken, should lead to the prevention of one-fifth of all cases of carcinoma of the stomach. The remaining four-fifths have achlorhydria or a very low acidity. There is much evidence, which I summarised in my Schorstein Lecture at the London Hospital in 1928, to show that the achlorhydria is not due to the growth, but to the chronic gastritis which precedes it. Just as chronic mastitis and chronic glossitis are recognised as precursors of carcinoma of the breast and tongue respectively, so, I believe, is chronic gastritis the common precursor of carcinoma of the stomach. Unfortunately, in most cases of chronic gastritis, which is a very common condition, there are no digestive symptoms. The condition is, however, often discovered in the routine investigation of patients suffering from a variety of diseases. Thus the achlorhydria of gastritis is the most common cause of chronic diarrhœa, and 50 per cent. of cases of cholecystitis and gall-stones, 33 per cent. of chronic appendicitis, 50 per cent. of rheumatoid arthritis and 20 per cent. of asthma have chronic gastritis with achlorhydria or extreme hypochlorhydria. Achlorhydria is the essential predisposing cause of Addison's anæmia and subacute continued degeneration of the spinal cord, and though it is generally the result of constitutional achylia gastrica, it is also sometimes the sequel of chronic gastritis. In the past it has been the custom to give hydrochloric acid to all patients with achlorhydria, but this is treating the result of the gastritis and not the gastritis itself, and I know of two such patients who some years later developed carcinoma of the stomach. Removal of the cause of the gastritis and direct treatment by lavage with dilute hydrogen peroxide generally cure the gastritis and restore the secretion of gastric juice, so that it is only necessary to give acid in the comparatively small number of cases in which the damage to the mucous membrane has been so severe that complete atrophy of the oxyntic cells has occurred.

It is unfortunately only a minority of cases of chronic gastritis which are likely to be recognised on account of the direct symptoms they produce or the secondary diseases to which they predispose. But in most cases chronic gastritis results from some easily recognised cause. Firstly, acute food-poisoning, in which vomiting and pain in the epigastrium occur, is always accompanied by acute gastritis and is very frequently followed by achlorhydric gastritis. So-called gastric influenza is also frequently associated with acute gastritis and followed by chronic gastritis. In both cases chronic diarrhœa is a not uncommon sequel. In these conditions, even if apparently complete recovery takes place, a test-meal should be given a month or two later, and if achlorhydric gastritis is present this should be treated without delay. Most other cases of chronic gastritis are the result of excessive cigarette smoking, alcoholic excess—especially the consumption of cocktails and spirits on an empty stomach, pyorrhœa alveolaris or chronic infection of the tonsils or nasal sinuses. If the public can be taught to realise that the greatest service the medical profession can pay them is the prevention and not the cure of disease, then the opportunity will be given for the general practitioner of the future to warn his patients of the dangers of excessive smoking and drinking, to see that they visit their dentists at least twice a year and always

practise a careful dental hygiene, and to recognise and treat pharyngeal and nasal sepsis at its onset, when treatment is most likely to be successful and before the mucous membrane of the stomach has been damaged by the constant swallowing of infected matter. In these ways, trivial as they may appear at first sight, it should be possible to prevent the development of cancer of the stomach by preventing or by recognising and curing its precursors.

We owe to Lord Moynihan our knowledge of the "inaugural symptoms" of gall-stones—symptoms which are due to the cholecystitis which almost always precedes their development. Many surgeons believe that the only adequate treatment of cholecystitis is cholecystectomy But in its early stages, before the patient is likely to be seen by the surgeon, it is generally curable by medical means. This "medical cholecystitis" is very common, but too rarely diagnosed, though its symptoms and signs are definite enough. Since Dr. Ryffel pointed out to me some eight years ago that the only reason why hexamine cannot, as a rule, be given in bigger doses than 45 grains a day is that the acid urine sets formalin free in the bladder, I have regularly given as much as 300 grains of hexamine a day with sufficient alkalis to keep the urine completely alkaline. Dr. Knott has shown what an efficient biliary antiseptic hexamine is when given in this way. We have found that it cures the majority of cases of "medical" cholecystitis, especially if combined with non-surgical drainage of the gall-bladder by means of magnesium sulphate, given in the morning on an empty stomach so that it rapidly enters the duodenum, where it leads to reflex emptying of the gall-bladder and bile ducts. Lord Moynihan has himself told me that no treatment has made such an inroad on the activity of surgeons during recent years as the use of massive doses of hexamine in cholecystitis. Thus the future of the surgery of diseases of the gall-bladder lies in its prevention by the early diagnosis and adequate treatment of cholecystitis.

I have no time to consider the diseases of the colon, but here again one may hope that in the future prophylaxis will often take the place of the surgery of the past.

We are thus forced to the conclusion that abdominal surgery, the branch which has made the greatest strides in the last twenty-five years and which has reached such a degree of technical perfection that Lord Moynihan can claim that no further improvement is possible, is a branch which will die of inanition by 1950. We are, Lord Moynihan said, at the end of a chapter. I am inclined to think that this chapter is the end of the book.

Though Lord Moynihan claimed that the craft of surgery has nearly reached its limit in range as well as in safety, I do not think that there are many who will agree with him so far as the surgery of the central nervous system and the surgery of the chest are concerned. So far as one can see, there is little hope at present for prophylaxis of tumours of the brain and chest. But the surgery of these conditions is still in its infancy, and the work of such pioneers as Cushing on the one hand and of Tudor Edwards and Morriston Davies on the other makes it reasonable for us to hope that, with earlier diagnosis, the near future will see an advance in the scope of the surgery of the central nervous system and of the chest comparable with that of the abdomen in the last twenty-five years.

Surgery in Modern Dress

(Scene.—*An Operating Theatre. A Surgeon is discovered operating, attending whom are Apprentice-Surgeons, Men-at-arms, an Anæsthetist, a few Heralds, Nurses, Americans, Lords, Cardinals, Ministers, and a Dental Student.*)

SURGEON.—

But to conclude whereon I lately spoke :
I deem it just that rosemary should be used ;
And rue, and blood cranesbill, hellebore,
That stinks upon our hedges in the spring ;
Sweet sorrel, amarynth and celandine
Mix in a potion to your healthy wounds.
But if a foul contagion enter there,
Add bladder-wort, duck-weed and maidenhair.
Now to this poor wretch we'll turn our minds.
Give me a knife.

To plate or not to plate ; that is the question :
Whether it is better for this man to suffer
The trials and errors of a plaster confine,
Or that I, having plated, should again
Be cursed with this man's ills, the bolting of
Our armature in due time being loose ;
Or that the native hue of resolution
Be stoppéd quite with endless suppuration.
His leg 's not out of joint. To prove I'm right
Visit those X-ray photos with your sight.
(*Patient groans.*)

But soft, it speaks again.

ANÆSTHETIST.—

What noise is this ?
I that am cruel am yet merciful ;
I would not have thee linger in thy pain.
(*Smothers him.*)

The Soccer Fan (Malgré Lui) at Honor Oak Park

SURGEON.—
Gloucester and Hereford do work as thus :
Sewing this tendon, severed right across,
Unto this bone ; which evil having done,
They make and end, but do not make a cure.
Attend me close, thus, thus, I make my stroke.
See what an envious rent I now have made.
How better far to have your cure by me,
Who master in this art have now become.
As when great Phœbus in his chariot's fire
Turns the grey sky, scarce freed from winter's hand,
Into a glorious primrose bed of gold
For Aphrodite and the rosey nymphs,
Attendant on the immeasurably distant space
And time, which holds the proudly deathless gods,
So I do light the world with my bright fame,
The silly world of lumps and bumps, which we
So richly do deserve to live amongst,
Having no greater sense for aught than these.
But damn, thou blackened spawn from Error's maw,
That was the most insensate cut of all ;
This artery here by you is clean cut through.
I say no more, but bid this mess adieu.
(*Exit* Attendant *with* Patient.)
Now, dog, explain yourself.

APPRENTICE-SURGEON.—
Proud Welshman, list to this, my words are short—
As once Glendower did vex great Hotspur's mind
With talk of spirits and the vasty deep,
So vexeth thou mine ears with thy vain talk.

SURGEON.—
Take back those words. Sweet lords, how shall I speak ?
'Tis true the passions of my youth I spent
In follies that were natural for my age—
But I demean myself to talk like this :
To prove thou liest, dog, there is my gage.

It must be now perfectly obvious that somebody has got to be stabbed ; therefore, the author will be pleased to get straight on to the epilogue, assuming the reader can picture a bloody stage, corpses and a dead march.

The author thanks those concerned for the illustrations, which include two coloured plates of psoriasis, and some other pictures torn out of Eccles' " Hernia."

EPILOGUE (spoken by Author).
Gentle reader, be forlorn,
To-day the *Daily M* . . . is born.
Hail, loathsome, beastly, noisome day,
As nauseous as is this play.

Where once a chap could get a drink,
Talk to his friends, and smoke, and think ;
The gilded saxophone now sings,
And jew's-harps strummed by hirelings.

So, readers, now I hope that quick
This silly play will make you sick ;
And on this all too-small a page
Well may you void the Modern Age.

G. P. B. W.

The Evolution of Disease

The Presidential Address to the Bolton and District Medical Society by R. D. Mothersole, Esq., M.D., M.S., F.R.C.S.

THE subject of my paper is " The Evolution of Disease." In most cases of disease there are two factors to be considered : the constitution of the individual and his environment. Both these factors are liable to vary from time to time, and the nature of the disease will tend to vary with them. In the course of ages great changes have taken place both in *homo sapiens* and in his environment. But the differences between the Neanderthal man and the modern town-dweller, striking though they be, are small in comparison with the changes which have taken place in their respective habits and surroundings. Civilization may be roughly divided into four stages, which, however, tend to overlap, and all of which may be found existing in certain parts of Africa at the present day :—

(1) The hunting or predatory stage, in which the natives live entirely on such fish, animals and insects as they can catch and such fruits and vegetables as they find growing wild. The Bush-men of South Africa and the native blacks of Australia are at this stage of civilisation to-day.

(2) The pastoral stage, where subsistence is mainly derived from domesticated flocks or herds.

(3) The agricultural stage, when subsistence is chiefly derived from cultivating the soil.

(4) The industrial stage, in which the bulk of the population is collected in large towns or cities.

If we divide diseases into groups according to their causation we shall find that most diseases will be included in four groups :—

(1) Diseases due to micro-organisms or parasites.

(2) Diseases due to excess or deficiency of the chief necessaries of life, such as foods, sunlight, etc.

(3) Diseases due to excess, deficiency or perversion of the internal secretions of the body.

(4) Diseases due to over-exertion or physical or mental strain.

From the evolutionary point of view the most interesting diseases are the zymotic group due to the action of micro-organisms on the living body. Bacteria may be divided into those which are capable of causing disease and those which are not. In the case of infections or contagious disease, it is customary to assume that the infection or contagion must have been transmitted from a previous case of the same disease. But there must have been a first case of that particular disease at some time or other. Even the most hard-boiled Fundamentalist would hardly maintain that our first parents appeared upon this earth suffering from the whole gamut of infectious diseases, from measles to smallpox, from syphilis to cholera. We must therefore conclude that, under favourable conditions, bacteria, ordinarily incapable of attacking the human body, may become capable of attack. That is, non-pathogenic germs may become pathogenic. It is certain that changes take place in the body if exposed to certain conditions which render it susceptible to invasion by bacteria which could gain no footing in a healthy body. Thus we know that overcrowding and starvation are liable to cause outbreaks of typhus or famine-fever. If rats are kept in a confined space and allowed to multiply, they may remain healthy up to a point, but after a certain degree of over-crowding has been reached they will develop epidemic disease. In the same way, if a grouse moor becomes overcrowded, epidemic disease will develop. The pestilence recorded in the Old Testament as the result of David's numbering the people probably arose in a similar way. In order to facilitate the census the people crowded into the towns and villages, and the infection was carried from town to town by the census-takers and their followers.

When bacteria have invaded an unhealthy body and become pathogenic they develop and acquire greater virulence and become capable of attacking healthy people.

One of the most terrible of diseases which in the days of our ancestors was manufactured in this way was that known by the name of "hospital gangrene," or spreading mortification. Its worst outbreaks occurred in wartime, when a large number of wounded persons with foul, suppurating sores were crowded together under one roof with little or no ventilation and no efficient antiseptics. Zola's "Débacle" gives a graphic picture of the sufferings of the French wounded after the battle of Sedan.

But it also desolated the civil hospitals. Erichsen, writing about 1880, says: "I believe that the disease may at any time be produced by overcrowding of patients with suppurating wounds in one room. The last outbreak that occurred at University College Hospital more than 25 years ago was evidently due to this cause. In one of my wards which is intended to contain 15 or 16 patients only, 21 patients were admitted and slept for one night, many of them having suppurating wounds. The result was an outbreak of hospital gangrene which spread through the institution, and was most serious and persistent." I have seen it stated that during one period every case of compound fracture admitted into the Royal Infirmary at Edinburgh proved fatal from hospital gangrene or other septic disease. For a patient to be sent for operation into a hospital where hospital gangrene was rife was almost equivalent to a sentence of death. Contrast that picture with the aspect of our hospitals at the present day, and be thankful for the tremendous improvement due to antiseptic treatment and other hygienic measures. I have never seen a case of hospital gangrene, but when I was House Surgeon at the Northern Hospital at Liverpool 40 years ago I remember an elderly surgeon saying to me: "I always like to come to the Northern, because there is so little hospital smell about the place."

The relation between the bacillus and the body may be likened to that between seed and soil—if the seed be vigorous it will grow in unfavourable soil; if the soil be fertile, even poor seed will flourish.

In certain infectious diseases the relation between an infectious disease and the population is similar to that between fire and fuel. An epidemic resembles a forest fire, where there is abundance of fuel, and the intensity of the flame is so great that it will overleap barriers which would arrest a smaller fire. In 1846 a case of measles was imported into the Faroe Isles, and as a result more than three-fourths of the population were attacked and many died. In 1875, measles was introduced into Fiji, and in the course of three months about a quarter of the population died from that disease.

The methods which are used to check an epidemic, viz., quarantine and vaccination, are very similar to those employed to fight a forest fire. Vaccination corresponds to the method of lighting a small, easily controlled fire line in front of the main conflagration so as to leave a burnt-out belt too broad for the main fire to cross. As an instance of the value of vaccination I will quote from Ofler's "Modern Medicine": "Before the Ameri-

can occupation of the Philippines there were at least 40,000 deaths annually from smallpox. In 1902 a system of compulsory vaccination was introduced, and the death rate dropped at once; from 1912 to 1916 the deaths were under a thousand a year. Then came a period in which vaccination was neglected, and in 1919 there were 45,000 deaths. Nowadays in England we know much about vaccination and comparatively little about smallpox, but there was a time in this country when the disease was so rife that any girl whose face was not pitted by smallpox was considered to have some claim to beauty.

The second group of diseases, those due to excess or deficiency of the chief necessaries of life, are obviously due to our present ill-developed state of civilisation, which on the one hand leads to gout or obesity from over-indulgence and want of exercise, on the other to rickets and tuberculosis from a shortage of vitamines and ultra-violet rays. When we become saner and more intelligent all these diseases ought to disappear. Clothing and footwear are also responsible for certain troubles. Chlorosis, so common in young women 30 years ago, and now almost unknown, was probably due to tight-lacing. Bunions and hammer-toes are due to feet being forced into shoes too small for them. It is a pity when, as in China, feminine attractiveness should be deemed to be enhanced by the paucity of its understanding.

We know comparatively little as to the causation of the third group of diseases, those due to excess or deficiency of the internal secretions of the body. But we have learned much in recent years with regard to curing or relieving these diseases by supplying the substance in which the body is deficient. Diabetes mellitus, myxœdema and rheumatoid arthritis are conspicuous examples of this.

The fourth group, those due to physical or mental strain, will obviously, during any era, be closely correlated with the prevailing conditions and circumstances as well as with the physical and mental development of the individuals existing at the time. In the Miocene period, over-exertion may have been due to bad hunting or escaping from prehistoric monsters; nowadays it is most likely to result from the desire to achieve athletic records, but it may occur in avoiding the modern Juggernaut. Forty years ago we used to hear a lot about railway spine, now it is never mentioned, though I believe some people still travel in trains. But the loss is much more than compensated for by the prevalence of traumatic neurasthenia, which often develops on slight provocation. Mental over-strain will depend partly on the degree of cerebral development, and partly on the intensity of the stimuli applied to the cerebrum. One almost wonders when our asylums will have to provide special wards for the devotees of crossword puzzles and contract bridge. I hope I have said enough to convince you, if you needed convincing, that the nature and extent of disease will vary according to the progress of civilisation. I will now give you a few figures taken from the Annual Reports of the M.O.H. for Bolton, comparing the death-rates from certain diseases in the years 1890 and 1929 respectively. In the former year the population was estimated to be 115,000, in the latter 181,000, more than half as much again. For the purposes of comparison I have therefore increased the figures for 1890 to what they would have been if the population were as big as in 1929:—

Deaths from	1890	1929	
Measles	146	11	
Scarlet fever	84	4	
Diphtheria and croup	58	8	
Typhus	3	0	
Typhoid	34	1	
Diarrhœa and enteritis	219	31	
Peritonitis	36	42	Appendicitis
Phthisis (pulmonary)	281	121	(and peptic
Sarcoma and cancer	105	204	(ulcers.
Influenza	27	208	
Death-rate	25.77	15.4	
Infantile	176	103	

These figures reflect great credit on our Medica. Officers of Health and Public Health Committees[In the first six groups, measles, scarlet fever, diphtheria, typhoid, typhus, and diarrhœa, the deaths for 1890 totalled 544; for 1929, totalled 55. It is worth noting that in 1890 there were 14,850 ashpit privies in the borough, which in proportion to the population would correspond to over 22,000 at the present day. Last year there were only 1,226, that is only about 6 per cent. of the number in 1890, and it is to be hoped they will soon be abolished altogether. Of course other factors have helped, such as notification, improved water supply, and general hygienic measures, but in a large number of zymotic diseases the infection is probably fly-borne, and privy middens are a potent source of infection. In the words of an obscure parodist:—

> "For East is East and West is West,
> And what do the latter know
> Of the reek of a privy midden
> And the flies which come and go?"

I ought to mention here that our Medical Officer of Health, Dr. Moffatt, attributes the diminution of flies and the consequent infection to the replace-

ment of horses and stables by motors and garages. But I still pin my distrust to the privy middens.

I must also tell you that, owing mainly to the epidemic of influenza in the spring, 1929 was a much less favourable year, both in the general death-rate and the infantile mortality, than several previous years. In 1928 the general death-rate was 12.7, less than half what it was in 1890, and the infantile mortality 64, as compared with 176 in 1890.

Pulmonary tuberculosis also appears to be diminishing steadily. In 1929 the number of deaths was proportionately only three-sevenths of that for 1890. On the other hand, deaths from influenza have risen from 17 to 208, and deaths due to cancer and sarcoma from 70 to 204. Part of the latter increase is, no doubt, due to more accurate diagnosis and part to the fact that people generally live to a greater age. But it is remarkable that sarcoma in infants and young children, which was fairly common 40 years ago, is rarely seen now. In 1890, 24 deaths were due to peritonitis : neither appendicitis nor peptic ulcer is mentioned as a cause of death, so these 24 deaths presumably correspond to the 42 deaths from appendicitis and peptic ulcers last year. Forty years ago appendicitis and perforating peptic ulcers were rarely, if ever, the subject of operation, except in those cases where a so-called perityphilitic abscess formed and made its way through the abdominal wall. In the ninth edition of Erichsen's "Surgery," published in 1888, the word appendicitis does not occur, though it is mentioned that many cases of typhlitis might be due to inflammation of the appendix. In the same book there is no mention of perforation of the stomach or duodenum. While I was a student at Guy's, between 1883 and 1890 I only came across two cases of appendicitis. Both were operated on by distinguished surgeons as cases of peritonitis, one case being operated on twice, but in neither case was the appendicitis discovered until the post-mortem examination. The same thing happened with regard to two cases of perforated gastric ulcer—the cause of the peritonitis was only discovered after death. After making every allowance for faulty diagnosis and the dread which surgeons in those days had of opening the peritoneum, it cannot be denied that appendicitis and perforation of peptic ulcers were very much less common then than they are now. Why should this be so ? The most reasonable explanation is that, as the result of changes in diet, etc., the streptococci which are responsible for these diseases have acquired a greatly increased virulence. The same explanation may partly account for the lamentable fact that, in spite of the great improvements in antiseptic treatment, deaths from puerperal fever are almost as frequent as they were 20 years ago. A further factor in puerperal morbidity is the higher average age of primiparæ. And I believe that most midwives and probably some doctors, though they use antiseptics, do so in such dilute solutions as to be almost useless.

Two diseases which have come into prominence in recent years are botulism and epidemic encephalitis. Botulism, or sausage disease, has been recognised since 1735, but has become much more common recently, especially in America. This is not surprising when we consider what immense quantities of canned goods are consumed in that country. It is worth noting that preserved vegetables and fruits, if infected by the bacillus botulinus, may be as poisonous as any animal product.

Epidemic encephalitis, or sleepy sickness, was first described in 1917, but it is probable that it appeared on the Continent in epidemic form as long ago as the beginning of the 18th century. So far as this country is concerned, however, its appearance in epidemic form is new. Although these two diseases, botulism and epidemic encephalitis, are not new diseases, they are evidently increasing, while other diseases are diminishing and will, we hope, eventually disappear. But the most important practical point about the diseases which we have considered from the evolutionary point of view is that most of them are, or ought to be, largely preventable. And prevention is better than cure. In this prevention almost anyone can help if only to a small extent. Every one of us can refrain from adding to the dirt and litter of our streets, and from going to cinemas or other crowded places when suffering from colds or other infectious diseases. Everyone can help to lessen the plague of flies and to diminish the smoke nuisance. The splendid work of preventive medicine is not solely the concern of doctors, nurses and sanitary inspectors, but is also, to some extent, the duty and the privilege of every citizen.

Guy's Hospital Gazette

(ESTABLISHED 1872)

A Journal of Hospital News, Medicine, Surgery and Dentistry.

Published on Alternate Saturdays. Price 9d.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Nursing News

DIPLOMA OF NURSING

University of London

WE offer our congratulations to Miss H. M. Gration (Sister Tutor) on gaining the highest academic distinction in nursing in England. Miss Gration obtained distinction in Part B of the examination.

The following nurses were successful in the October Final State Examinations, and their names have been entered on the General part of the State Register :—

Beardmore, C.
Berry, F.
Barford, M. F.
Boullin, F.
Bentham, E. B.
Buckler, O. M.
Cooke, S.
Chandler, K. A.
Chrisp, W.
Collins, M. M. P.
Donovan, M.
Etheridge, V.
Farr, E.
Gladstone, M.
Goodall, Z. M.
Grundy, R
Griffith, E. M.
Jeavons, P. M.
Lewis, E. J.
Lloyd, M. E.
Lambert, D.
M'Donagh, C. T.
Maryon, B.
Newington, D. K.
Oram, K. C.
Parkins, D. G.
Rogers, W.
Revill, O.
Sievwright, J.
Tallyn, B.
Townend, J.
Wilson, O.
Wilson, M. M. Y.

Affiliated Training

(Guy's and Cancer Hospital, Fulham Road)

Pickering, I.
Rout, S. A.

The College of Nursing Endowment Fund

Our final effort for the College of Nursing Endowment Fund was a concert in the Nurses' Home on November 20th and 21st. The general sitting-room was filled to its utmost capacity on both nights, and the performances seemed to be very much enjoyed.

After the dress rehearsal we all retired to bed in despair, and it was suggested that the audience who had been admitted at the reduced fee of 2d. should have their money refunded. The stage manager said that a poor dress rehearsal often meant a successful first night, and that the psychological effect of a stage and footlights would make an amazing difference, and so apparently it did.

The Works Department again came to our aid and erected the "scenery and effects." As we now realise it is impossible to do anything "on the level," we cannot be too grateful to them.

The programme contained a variety of items : pianoforte solo by Nurse E. M. Brown ; songs by Nurse Lord, Nurse Fuller, Nurse Marriott, Nurse Orchard, and Nurse Shearn ; recitations by Nurse Rea, Nurse Huggard, Nurse N. Jones ; violin solo by Miss Burville-Holmes ; dances by Nurse Clunies-Ross and Nurse Dorothy Wright. A topical surprise item, "Ten Little Nurses," songs by Miss Buchanan, were delightful. A sketch entitled "Mechanical Jane," in which Nurses Marriott, Fuller and Nockolds took part, caused a great deal of amusement. Nurse Nockolds made an excellent Robot. The finale was a group of songs around a camp fire.

Admission was 1s., including refreshments. The proceeds amounted to £14. This, together with the proceeds of a small jumble sale and a few other donations, has brought our total subscription to the fund to £550. N. J.

Text-book for Nurses. By Groves and Brickdale. Published by Oxford Medical Publications. *Price* 20*s.*

THIS book is now so well known to nurses in training that the fourth edition needs little further introduction. It has been thoroughly revised, and the section on medical diseases has been further amplified. The book presents the subjects in the syllabus for the State Examinations in a most palatable way, and all nurses would be well advised to obtain it and use it during their training. The illustrations throughout are one of its most attractive and helpful features.

Guy's Hospital Reports

Vol. 80, No. 4, Oct., 1930

WE regret that the following was received too late for publication in the last issue of the *Gazette* :—

Contents.

Satirical Prints of Thomas Guy. By Sir William Hale-White, K.B.E., M.D., LL.D., Consulting Physician to Guy's Hospital.

Studies of Tumour Formation.—X. The Teratomata. By G. W. Nicholson, M.D., Professor of Morbid Anatomy, University of London, Guy's Hospital.

Staphylococcal Infections.—IX. Osteomyelitis. By C. H. Fagge, M.S., Surgeon to Guy's Hospital.

Restoration of Gastric Secretion in Addison's Anæmia by Treatment of the Gastritis. By Arthur F. Hurst, M.D., Senior Physician to Guy's Hospital.

A Case of Addison's Anæmia with Achlorhydria resulting from Gastro-Jejunostomy performed for Gastric Ulcer. By R. Glanvill and A. F. Hurst.

A Case of Non-Addisonian Anæmia with Achlorhydria resulting from Gastro-Jejunostomy per-

formed for Duodenal Ulcer. By C. F. Cosin and A. F. Hurst.

Chlorosis in Males. By L. J. Witts, M.D., Assistant Physician, Guy's Hospital, Will Edmonds Research Fellow.

Report of the Asthma Clinic, 1928-30. By F. A. Knott, M.D. Hæmatologist and Assistant Lecturer in Bacteriology, Guy's Hospital; G. H. Oriel, M.D., Anderson Demonstrator in Clinical Chemistry, Guy's Hospital; and L. J. Witts, M.D., Assistant Physician, Guy's Hospital, Will Edmonds Research Fellow.

A Preliminary Note on Sinusitis in Asthma. By C. Gill Carey, F.R.C.S.Ed., Surgeon to Central London Throat, Nose and Ear Hospital.

A Case of Tuberculous Infection and Carcinoma of the Stomach. By A. F. Hurst, M.D., Physician to Guy's Hospital, and M. J. Stewart, M.B., Professor of Pathology, University of Leeds.

Submucous Lipoma of the Colon. By R. A. Ratcliff.

A Case of Enterocystoma of the Duodenum Simulating Congenital Pyloric Stenosis. By R. E. Smith, M.B., Clinical Assistant to the Department for Children's Diseases, Guy's Hospital.

A Case of Mediastinal Dermoid Cyst in an Infant. By R. E. Smith, M.B., Clinical Assistant in the Department for Children's Diseases, Guy's Hospital.

The treatment of Vertigo by Destruction of the Labyrinth with Absolute Alcohol. By W. M. Mollison, M.Ch., Surgeon in Charge of the Ear and Throat Department, Guy's Hospital.

Some Notes on Duodenal Ileus. By J. Gaymer Jones, M.C., M.S., Surgeon, King Edward VII Hospital, Windsor.

A Case of Hæmatemesis treated by Gastric Lavage. By A. Nelson Jones, M.B.

Irradiation and the Leukæmias. An Index to more successful Treatment. By F. A. Knott, M.D., Hæmatologist and Assistant Lecturer in Bacteriology, Guy's Hospital, and W. L. Watt, C.M.G., M.D., Surgeon in Charge Deep Therapy Department, Guy's Hospital.

Abdominal Orthopædics. By W. H. Ogilvie, M.S., Assistant Surgeon to Guy's Hospital.

Thirty-Six Years' Service with the Clubs' Union at Honor Oak Park

By Mr. W. Harris, the Groundsman

I HAVE been asked to write a short history of my life and my connection with the ground at Honor Oak Park during my 36 years' service with the Clubs' Union. Of course, it is quite impossible to mention all of the many thousands I have met during that time, therefore I propose to give you a few of the most prominent players as they recur to my memory.

I was born at Kimberley, in the County of Notts, 1864, and quite early I began to take an interest in local cricket. My first club was a boys' club, for which I played for three years, and each match we played, every player had to contribute threepence for the cost of the ball, and the side that won took the ball, so you can imagine how keenly we played these games. After this I joined the Men's Club, and did so well with both bat and ball that I was selected to play for the Notts Colts against the County on the Trent Bridge ground on Easter Monday and Tuesday, 1884. In this match I did quite well, and came out top scorer with 34, after which I was asked to play for the County in two of their matches.

Previous to this season I had a professional engagement with the Moreton-in-the-Marsh Club, Gloucestershire, and during the following season I was professional to the Hintlesham Park C.C., Suffolk. It was during the time I was with this club that I had an offer from the Surrey Club to join their ground staff on the Oval, which I accepted. I did fairly well both with bat and ball, and I was asked by the Surrey Club to stay and qualify for the County. It was here I got my first lessons in ground work, as during the winter we had to assist on the ground. The first winter I was under Mr. J. Newton, who had been with the club some years, and the next winter I was under Mr. S. Apted, who had the reputation of being one of the best groundsmen in the country, and from him chiefly I got my first knowledge of ground work. I stayed at the Oval for a period of six years, playing for the County occasionally.

It was during the summer of 1891 that I was approached by the Guy's Hospital authorities, Dr. Lauriston Shaw and Mr. A. D. Fripp (afterwards Sir Alfred), with a view to taking charge of their new ground, which was in course of construction at Honor Oak Park. After due consideration I decided to accept this offer, and came to H.O.P. at the end of March, 1902. At this time only a small portion of the ground was laid, so it was not possible to play matches until the following season.

But football was commenced during the winter of 1902-3, when we had a Rugby pitch over the farther side, next the Crofton Park Road.

The ground was officially opened in May, 1903, with a garden party, also cricket and tennis matches, both Past *v.* Present, also the Scots Guards Band. Guy's had at this time one of the best cricket teams they ever had. I believe it was in 1894 that five members of the team played for their respective counties, viz.:

J. H. Joyce for Leicestershire,
C. J. Francis for Gloucestershire,
E. T. Shorland for Wiltshire,
C. A. Trouncer for Surrey,
W. I. Hancock for Somerset,

which, as far as I can remember, is a record for Guy's cricket. I think W. I. Hancock held another record which I do not think has ever been equalled, which was captain of Rugby, cricket and tennis. During my time Guy's has had a good number of real good cricketers. During the years 1902-3-4-5 we had a very strong side, composed of H. Barber, F. Morres, H. D. Wyatt, E. Morgan and H. M. Langdale. It was this side that put up a record for Guy's cricket, as far as I remember, against St. Mary's Hospital in the final of the Hospital Cup at H.O.P., scoring 573 for 6 wickets (dec.): H. Barber, 101; H. D. Wyatt, 166 (not out); and E. Morgan, 132 (not out). This match was remarkable for the number of runs scored in one day; besides the 573 of Guy's, St. Mary's scored 130 for 3 wickets, which brought the total to over 700 for the first day's play. St. Mary's totals were 252 and 132.

I believe H. Barber holds the record for a Guy's player for the highest score made at H.O.P., viz., 180, which was made in a Cup Tie, although he beat this in a match against Sir Joseph Laycock's XI at Bawtry, near Doncaster. H. Barber and F. Morres put up a record stand for the first wicket of 351, of which H. Barber scored 185 and F. Morres 176. This was against a fairly strong side which included two professionals.

Several other notable men who did excellent work for Guy's cricket were A. E. Clarke, who was a good all-round player; E. P. Barnett, a real class bat who played for Gloucester on many occasions; F. Kahlenberg, who was a very good bowler; and R. Montgomery, who was another good all-round player. Guy's have also had two or three wicket-keepers of outstanding merit, notably Mr. Graham-Smith, Mr. Whitcombe, and Mr. E. J. Pye-Smith. All of these would have done credit to any first-class team.

This brings us down to the time of the war, when the ground was closed to cricket except by the Crofton Park Club, who managed to struggle along with a team of old men and boys. After the war we had a big influx of South Africans, several of whom were very good cricketers, notably T. Wooldridge, who was a very fine bat and good bowler, and G. D. Shaw, who was a brilliant bat when once he got off the mark. L. S. Williams was also another good all-round player, and then we had J. G. Van Schalkwijk, who was one of the finest bowlers Guy's has ever had, besides E. J. Pye-Smith, who was the soundest of them all. T. O. Garland was also a most brilliant bat when he once got going. As an instance of this I might mention the game against Honor Oak, who have the reputation of being one of the strongest teams in club cricket. Honor Oak scored 285, all out, and Guy's had just two hours in which to get the runs, but so well did Guy's bat—T. O. Garland, 100 in 40 minutes, and E. J. Pye-Smith, another century—that the runs were knocked off with ten minutes to spare.

To speak of Rugby is rather a more difficult proposition. Being a cricketer myself, I perhaps took more interest in cricket than in football, but Guy's have always during my time been a great force in the Rugby world, and have contributed a good number of players to represent their various countries. One of the first I remember was A. Allport, who captained the England XV; then followed H. W. Dudgeon, H. Archer, G. R. Hind, H. Lee, A. Alcock, R. F. H. Duncan, and also J. A. Krigl, who all played for England; E. Morgan, J. P. Jones and Graham-Davies for Wales; and L. O. Stokes and W. D. Doherty for Ireland. If I have omitted any others I apologise, as I am writing from memory. Guy's have had scores of other players well fitted for International honours; to try and mention them all would fill a volume.

Tennis has always played a prominent part at H.O.P., and Guy's have had hundreds of players who have been very nearly first-class, but I suppose P. D. B. Spence is the only one that comes in that category. We had some excellent teams at different periods, but I think the 1911 side was the best I can remember—composed of the following VI: W. R. Reynell, A. S. Roe (Oxford Blues); H. Sharpe, L. A. Graham (Cambridge Blues); R. Curle and R. S. Lucas. It would be interesting to get the opinion of old Guy's players on this point.

Association football has never had the same prominence as Rugby, but at different times we had some really good sides, winning the Cup more times than any other hospital. I think the sides we had about 1901-2-3 and 1920-1-2-3 were the best during my time.

And so we come to athletics—and we have had some great athletes during this period. When I first went to H.O.P. we had a wonderful Athletic Team, and it was in the Hospital Championship Competition of 1894 that, I believe, Guy's won 11 firsts out of the 13 events, H. T. Bell taking the 100 yards, 220 yards, the high jump and long jump; E. D. Scott the shot and the hammer; and H. A. Munro (who, I think, was the best distance runner Guy's ever had) winning the mile and 3 miles. It was during the following year that H. A. Munro won the 4 miles Amateur Championship.

Some other good athletes I remember were E. Morgan, who did the 100 yards at H.O.P. in 10½ secs.; also S. P. Wadson, F. W. Sime, H. W. Evans and, the greatest of them all, C. L. Steyn. I believe it was Mr. F. J. Steward who gave it out at one of the Hospital Dinners that C. L. Steyn had won more championship events for the hospital than any other man had ever done for any other hospital. He was also a splendid jumper, and set up some very fine performances.

I could go on indefinitely telling of different men I have met, but I must just mention two others, C. W. Harrison and W. Hertzog, both excellent athletes, who are, I believe, still holding up the reputation of Guy's. I must now close by sending best wishes to all the old Guy's men I have met at Honor Oak Park.

Correspondence

"Women in Medicine"

To the Editor of the GAZETTE

SIR,—It was a brave man who wrote in last week's GAZETTE that "if women could only realise the power that lies in her sex we would see no more of this thrusting into the affairs of men."

We should also be interested to know the writer's definition of a woman's work; perhaps, in common with so many Guy's men, he thinks it is to clear up after him—doubtless an "admirable sight," but we cannot be blamed for aiming a little higher.

Much has been said and written on women's emancipation, and surely by now it has been demonstrated that they can keep up to the male standard in most of the professions when opportunities have been equal. No divine law has ever pronounced medicine as men's affair exclusively, and the clear judgment that is the characteristic of their sex should surely allow Woman, handicapped so long by tradition and false sentiment, a chance to justify her place in the medical profession as in any other.

Yours, etc.,
A GUY'S PROBATIONER.

Nurses' Home,
Guy's Hospital, S.E.1.

SIR,—I have been interested in the observations made by the author of "Passim" with regard to women in medicine.

We are told that when woman "attempted to show that she could do a man's work as well as a man" she was making a mistake. It might, however, be suggested that medicine is not necessarily "a man's work." Indeed, nowaways it is held, more generally than is sometimes supposed, that there are very few professions in which woman cannot actually take part every bit as well as man. Surely medicine cannot be one of the exceptions, for women are especially adaptable to its practice.

Doubtless, however, any self-respecting woman would tremble to venture beyond her preserves after having encountered such opinions as those expressed in "Passim." She would, of course, stick to her woman's work, if only to earn herself the title of "an efficient machine, and an admirable sight."

It was instructive, though a little surprising, to learn further on that the late Dame Marie Scharlieb fought for a cause "*not yet won*"—"the *right* of women *to practise medicine*." The magnificent work of this woman pioneer is recognised throughout the medical world; and of the hundreds of fully qualified women doctors in England alone it is disappointing to be told that no one of them has the *right* to follow in her footsteps.

Yours, etc.,
EDWARD DUNSTAN.

Guy's Hospital, S.E.1.

Review

Beethoven's Deafness. By MAURICE SORSBY. Reprinted from the *Journal of Laryngology and Otology.* August, 1930.

THIS paper is of great interest, not only to those whose professional life lies with the diseases of the ear, but also to those who regard Beethoven as a great composer, as well as a pathological museum. The interest of the subject, absorbing as it is, is yet further enhanced by the admirable way in which the paper is put together; and it is only on looking at the bibliography that one realises how extensive have been the author's investigations into the literature, and how thoroughly has the evidence been weighed. It is a delightful paper, and well repays the few minutes spent in its reading.

Sport

Rugby

Guy's v. Birkenhead Park

BIRKENHEAD PARK visited Honor Oak Park on Saturday, November 23rd, and defeated the Hospital, after an interesting game, by 2 placed goals and 1 dropped goal (14 points) to a try (3 points).

Heavy rain which had fallen almost continuously throughout the week made the ground in a very bad condition. Just before the match started a sharp shower made matters worse, and, particularly in front of the stand, there were several pools of water, which made it almost impossible for any set scrummages.

Guy's lacked the services of Giesen and Popplewell, whereas the visitors fielded their strongest side, which included T. E. Knowles, just back from the New Zealand tour, and the Internationals, D. E. Law, J. V. Richardson and G. B. Wilson.

Considering the conditions, both sides played fine football, and it was surprising to see the heavy greasy ball handled with such accuracy.

Both Walter Lewis at full-back and I. K. Thomas in the centre gave a creditable performance—the kicking of Lewis was particularly good, and Thomas appeared to revel in the mud and was one of the best backs on the field. On the other hand, Johnson was off his usual form, and Springman, his opposite number was continually causing danger.

Taking advantage of the wind, Guy's at once attacked, and clever work by Windsor Lewis and Fichardt nearly met with success, but Wilson tackled the latter and relieved with a fine kick to touch.

The Park forwards then began to obtain possession and, following a scrum, Wilson made a fine run through the centre and sent Charles away on the wing. He looked a certain scorer, but Walter Lewis came across and brought him down in the corner.

Ably led by Batchelor and Robinson, the Hospital forwards made a great raid and carried play to the visitors' 25.

The Hospital kept up the pressure, and excellent fielding by Fichardt, Johnson and Thomas ended in the last-named scoring after running nearly half the length of the field.

The visitors at once retaliated by an equally fine passing movement, and with Springman eluding Johnson, it was left to W. Lewis to save the situation, which he did splendidly by bringing down Springman with a low tackle just as the latter was in full flight for the line.

Following an attempt to drop a goal by Richardson, a period of loose play followed at the end of which Gibson, a Park forward, took a wild kick, which he followed up. W. Lewis unfortunately missed the ball, and, although W. H. Lewis was able to get to it as it crossed the line, the latter was pushed off the ball and Gibson touched down for Richardson to convert.

Crossing over with a lead of 2 points and a fairly strong wind in their favour, the visitors were the first to take the offensive, following hard work by their forwards, and, after an exchange of long kicks by the respective full-backs, both Wilson and Springman made unsuccessful attempts to drop a goal.

Time after time did the visitors attempt to break through, but the sterling defence of W. H. Lewis, Fichardt and Thomas compelled several well-engineered movements of the Park backs to break down.

However, the perseverance of the visitors brought its reward when Wilson anticipated a pass from W. H. Lewis to Fichardt, intercepted and raced ahead to score easily between the posts, which Richardson converted.

In spite of several attempts of the Hospital to get through, the wind was a severe handicap, the Park threes initiated an excellent round of passing, which ended in Springman dropping a fine goal from near the touch-line.

Roberts, Birkenhead's scrum half, was injured just before the finish and had to retire, but there was no further scoring, and the visitors were left worthy winners after a really good game.

Team.—W. Lewis ; D. E. Ashdown, T. Fichardt, I. K. Thomas, A. G. Johnson ; W. H. Lewis (Capt.), R. J. Eustace ; J. S. Batchelor, J. P. O'Shea, R. G. Knight, I. G. Robin, P. K. Robinson, R. A. P. Hogbin, G. F. Lashmore, T. Morgan.

Hockey

Guy's v. Trinity Hall, Cambridge

GUY'S visited Cambridge on Wednesday, November 12th. For the first time this season Guy's were at full strength, and consequently won 5—2.

Trinity Hall were the first to attack, but they found the Guy's backs difficult to beat and play was quickly transferred to the opposite end.

After about five minutes, H. O. Lyne scored off a fine centre from C. A. Clarke. H. O. Lyne scored two more goals before Trinity Hall scored their first goal.

Guy's led 3—1 at half-time.

In the second half the game was more even, H. O. Lyne scoring two more goals while the Hall replied with one.

For this match R. A. Sykes was brought up to inside right, A. G. Richmond going to centre half, and R. V. Payne to right half. This interchange strengthened the Guy's forward line considerably.

The Guy's team, as a whole, played well, H. O. Lyne being on the top of his form and scoring all five goals.

Team.—H. V. Brown; G. N. Carrell (Capt.), F. R. Hayward; T. F. Todd, A. G. Richmond, R. V. Payne; R. O. F. Tilleke, L. N. Trethowan, H. O. Lyne, R. A. Sykes, C. A. Clarke.

Guy's v. Aldershot Command

GUY'S visited the Officers' Club, Aldershot, on Wednesday, November 19th. Owing to a mistake on the part of the hon. secretary, Guy's arrived without a goalkeeper, otherwise the team was at full strength.

The Command turned out a very strong team, including International, Army and Southern Counties players.

For the first quarter of an hour the play was very fast, several shots being saved by F. R. Hayward, who took up his position in goal when the Command were attacking.

The Command were the first to score with a shot that hopped over F. R. Hayward's stick, but Guy's soon replied with a fine shot from H. O. Lyne. Owing to the excellent defence of the Guy's backs, G. N. Carrell and F. R. Hayward, the score at half-time was only 3—1.

In the second half the Guy's umpire, S. N. Tinkler, played in goal. During this half the Guy's forwards were pressing hard, but, owing to the excellent performance of the Command goalkeeper, were unable to score. The Command then scored three more goals, one of which ought to have been saved. Guy's then scored a second goal through L. N. Trethowan.

The game was very fast, the Guy's team playing together as a unit, and individual efforts being less in evidence.

Team.———; G. N. Carrell (Capt.), F. R. Hayward; T. F. Todd, A. G. Richmond, R. V. Payne; R. O. F. Tilleke, L. N. Trethowan, H. O. Lyne, R. A. Sykes, C. H. Clarke.

Fencing

Guy's v. "Masks"

ON Saturday, November 29th, the Fencing Club entertained the "Masks," and suffered a severe defeat of 19 losses to 8.

In the foil event Monkhouse gave a convincing display of swordsmanship, while Pitts fought at the top of his form and was unfortunate not to win more than one of his fights. Wright was too apt to come off guard and expose his target, but succeeded in taking one of his contests to the seventh hit.

In epée the Hospital sustained a severe defeat, but when individual fights were considered, little difference was seen between the teams, as most of the contests had to be decided on time. Monkhouse fought well and won two fights, while Pitts was constantly well within his opponent's guard, but seemed unable to finish his thrusts. Hodgkin was inclined to be disappointing; the fact that he was encountering a team with a reputation seemed to deter him, and showed the necessity of further match experience.

The Hospital made its best showing in the sabre event, losing this by the narrow margin of one fight. Monkhouse was too apt to feint and lay himself open to stop hits, and but for this fault should have won all his fights. Irish was good, and in both his losses was defeated by the odd hit only, but he was rather over-cautious and neglected several opportunities of scoring by a *riposte*. Wright tended to be loose in his play, and shared with Monkhouse the fault of being open to stop hits. Apart from this he fought well, and was excellent in attack.

Although at first sight the score would indicate a bad defeat for the Hospital, this is mollified by the fact that the greater proportion of the fights were taken to a close finish, many being decided by one hit. The fencing in all weapons was of a high order, and the presence of an appreciative gallery contributed in no small degree to the success of one of the most enjoyable matches of the season.

The scores were: Foil—Monkhouse, 2 defeats; Pitts, 2 defeats; Wright, 3 defeats. Epée—Monkhouse, 1 defeat; Pitts, 3 defeats; Hodgkin, 3 defeats. Sabre—Monkhouse, 1 defeat; Irish, 2 defeats; Wright, 2 defeats.

Pass List

SOCIETY OF APOTHECARIES OF LONDON.
November, 1930.

Surgery.
W. K. Schnarr.

Medicine.
W. K. Schnarr.

Forensic Medicine, Hygiene and Insanity.
W. W. Parry.

Appointments

J. F. H. Stallman, M.B., B.S., F.R.C.S., Orthopædic Surgeon to Gloucestershire County Council.

J. D. Cambrook, M.R.C.S., L.R.C.P., L.D.S., Assistant Dental Surgeon, St. Bartholomew's Hospital.

Marriage

NESBITT-WOOD—ENGLAND.—On October 25th, 1930, at St. Augustine's Church, Birmingham, Gordon Nesbitt-Wood, M.B., B.Ch., to Cordelia Helen England, M.R.C.S., L.R.C.P.

EDS. { P. M. F. B. / P. V. R.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume XLIV *27th December* 1930 *Number* 1107

PASSIM

" There is another change occurring in our climate far slower even than the coming of an ice age and much more fatal in its consequences; it is the gradual but inevitable dying of the sun."

ALL great disasters are foretold by minor calamities; it is not of the solar system and its woes that we wish to speak in this column; we are concerned only with an evil confined to the medical profession.

We have just been glancing through the well-thumbed pages of our old Borradaile's " Zoology," discovered by accident underneath a heap of dusty note-books at the very back of the shelf, and it is borne in on us, we dare not admit how forcibly, how few of its once familiar words we can remember. When we first opened it so many years ago, stiff-backed and beautiful, new from the publishers, and looked at the strange monsters lying dismembered before our gaze, with the long, strange words underneath, we were struck with a feeling of despair—could one brain ever master all that in the short space of twelve months? And now we feel, what was the use of all that industry, of all those long nights spent over the circulation of the frog, the nervous system of that elusive elasmobranch, the dogfish, and the generative system of the humble worm? For what were all those diagrams executed in three colours, all those note-books filled to overflowing with copious and inaccurate remarks? At the beginning (can it be only five years ago?) we thought it a strange but necessary way of learning medicine, and now that we are qualified we still think it a strange way, and its necessity does not strike us quite so forcibly; and we ask ourselves again, " What was the use? " It is true that we acquired a working knowledge of the elementary facts of zoology and of chemistry, but are all the dicotyledons in the world worth the waste of twelve months of the most receptive period of our mental life?

Later, in learning physiology and anatomy, there was a great deal of matter which we have found indispensable in clinical work, but a very large amount of the facts which we learned at that time might equally well have never been studied for the little help which they have afforded us later. We can remember, only too well, spending several evenings learning the connections of the otic and the sphenopalatine ganglia; at the time we studied such things only to pass examinations, and, as soon as that danger was negotiated satisfactorily, the sphenopalatine ganglion was at liberty to slide imperceptibly but rapidly from the memory. Such niceties of anatomy and physiology are, no doubt, indispensable to the consulting physician and surgeon, but for the man who has set before himself the ideal of becoming a good general practitioner the hours spent over such details are so many hours wasted.

In the wards, not only must the student master the essentials of surgery and medicine, but also he must acquire a fairly extensive knowledge of pathology and bacteriology. Within limits, both these latter subjects are extremely valuable to him, but again their study is pushed to extremes. To know that this organism liquefies gelatin, and that one does not, that this is gram-positive, that gram-negative, will not help him one jot to understand or to combat diseases at the bedside.

The student learns such stuff parrot-wise, and at the appropriate moment he will reel it all out and pass his examination. In six months he has forgotten it all, nor is he any the worse a practitioner for that. In a few cases, unfortunately, such elementary theoretical knowledge as he may acquire leads him into the deeper waters of academical, theoretical medicine and biochemistry, before ever he has learned to flounder in the safe shallows of useful, everyday, clinical medicine. And such men are only too numerous and too dan-

gerous ; this, however, is a fault of the individual and not of the system.

The fault of modern medical training is the way in which academical knowledge is fostered at the expense of sensible bedside medicine. We do not advocate that the student should have less to learn, nor that he should have fewer years of study in his curriculum, but that he should be encouraged to employ his years of training in a more useful manner. For instance, after having spent only four months in the study of gynæcology and midwifery, a man may qualify and go into practice, and it is a tribute to Guy's as a teaching hospital that the level of obstetric skill is so high amongst her former students.

The gradual but inevitable dying of the medical sun is the fact that the general practitioner of the old type is slowly dying out—dead already, we believe, in America ; and this decay of an illustrious class is being brought about by the growth of specialism. In his examinations the medical student is expected to show a level of learning approaching, in theory at least, that of the specialist. We do not grumble that a high standard is required in such essential subjects as medicine, surgery and midwifery, but even in these the candidate may be called upon to display a knowledge of the technique of medical treatments or of surgical operations, sometimes which he has never witnessed save in the pages of his text-book, often which he will never be in the position to perform.

Any fool can cram advanced theories out of a book into his head ; not everyone can learn to apply such little knowledge as he may have acquired. It is a deplorable state of things that medicine is growing more and more a laboratory science, less and less a subtle and delicate art.

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We would like to express our deepest sympathy with Mr. and Mrs. Eason in their recent bereavement.

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Cerebral Tumours

A Clinical Lecture delivered at Guy's Hospital, December, 1930, by C. P. Symonds, Esq., M.D.

Gentlemen,—We happen to have in the wards at present several cases of cerebral tumour, and I have taken the opportunity to put two or three of these patients before you for discussion. What I shall have to say will be confined to the symptoms observed in these particular cases. I shall not attempt any review of the symptoms of cerebral tumour in general, for which I would refer you to your medical text-books.

This first patient I have to show you is a man of 37 who first attended at my Out-Patients two years ago with the complaint of fits. At first these were of a trivial kind. He would suddenly stop whatever he was doing, stare straight ahead and rub the tip of his nose violently. After a short interval he would come to himself and continue with his occupation, quite unmindful of the interruption. Such is quite a common variety of minor epileptic attack.

Now an epileptic attack, properly regarded, is a symptom. It is a symptom of disordered function in the cerebral cortex. And this disorder may or may not depend upon organic disease. If it does, sooner or later that organic disease is likely to produce other symptoms as well. But in the great majority of patients presenting epileptic attacks no such evidence of organic disease is ever forthcoming during life, nor is there any evidence of organic lesion after death. In such cases we are faced with evidence, in the shape of the fits, of a disordered function without anything else—the malady remains a symptom—and we speak then of symptomatic, functional or idiopathic epilepsy. But as we shall see from this and other cases whether the fits are idiopathic or organic, their character is the same. In other words, there are no means of distinguishing from simple observation of an epileptic attack, whether it depends upon some organic lesion such as a tumour or is functional in the idiopathic sense. Although the attacks of idiopathic epilepsy in 75 per cent. of cases begin before the age of 20, the first incidence in the remainder is spread evenly over the other decades of life, so that cases in which the first fit happens in adult life are by no means rare.

In the case of the present patient there were, when he first presented himself, no symptoms or signs of any organic disease, so that there was reasonable ground for assuming that the attacks were idiopathic, and he was accordingly treated with luminal and bromide, under which treatment his attacks at first diminished in frequency.

As time went on the attacks began to acquire a new character. His wife told us that at the moment when he lost his senses his right arm would go limp and powerless, perhaps trembling a little. Here we had for the first time an indication that the epileptic disturbance was arising in a

particular part of the cortex. Examination between the fits, however, still failed to show any evidence of organic disease. Later they increased in number, and have recently been associated with the complaint of headache. Together with this, his relatives have noticed a progressive mental deterioration. He has become forgetful and stupid, casual in his manners, and unrestrained in the expression of his emotions.

In addition, the patient has complained lately of headaches occurring independently of his attacks, and of a severe throbbing character.

On examination, we find that he is cheerful even to the point of jocularity, but is confused. Although for instance, he was admitted only two days ago, he asserts that he has been in hospital for a month, and he is unable to give us any clear account of his illness. There is a slight degree of swelling of the optic discs which, together with his headaches, indicates increased intracranial pressure, and, as you see, there is marked weakness, as he talks to us, of the right lower part of his face. He shows weakness also of the right half of the palate and of the tongue. There is a coarse tremor of both hands when he holds them out before him, and some slight weakness and spasticity of the right upper and lower limbs with increased tendon jerks on that side.

We may assume with some confidence that this man has a tumour involving the anterior part of the left frontal lobe. The tumour being in one of the so-called silent areas of the cortex produced, in the first place, epileptic attacks of a generalised rather than a focal character. As it slowly increased in bulk it has compressed or infiltrated the frontal lobe to a point at which mental deterioration has resulted. Finally, it has extended in a posterior direction far enough to interfere with the functions of the pyramidal fibres. This backward extension has presumably been deep rather than superficial, for it has spared those parts of the cortex which are concerned with speech and writing. It has at the same time grown to a bulk sufficient to cause an increase of the intracranial pressure.

Further investigations remain to be carried out in this case, in particular the Wassermann reaction, in case we may be dealing with that very rare condition a gumma of the brain, and an X-ray of the skull which might show a calcified growth and so, at the same time give us direct evidence of the situation of the tumour and possibly some idea of its nature.

I happen to have under my care at the moment in the National Hospital, Queen Square, a man whose story in many points resembles that of the patient you have just seen, and whose tumour has been successfully removed. I will therefore place him before you now.

He is a railwayman, aged 49, who came up to my Out-Patients in August last with the following story. Having previously enjoyed normal health, he had in April, 1925, an epileptic fit. This occurred in his sleep at night, and is clearly described by his wife as a generalised convulsion with loss of consciousness, in which the patient foamed at the mouth, bit his tongue and passed his urine in the bed. He recovered quickly from this attack and continued at his work, but at irregular intervals up to the time I first saw him had four other attacks of a similar nature. On only one occasion had he any warning of the fit. This was described as a "running, jumping sensation" all over his abdomen, which preceded loss of consciousness by two or three seconds. In addition, he complained of occasional attacks in which, without disturbance of consciousness, his left arm would give a momentary jump.

For the past two or three months before I saw him he had had almost every other day brief attacks of headache behind his eyes, and he had complained occasionally of misty vision. His wife added that, although he had continued at his work, he had become dull and lethargic.

On examination at that time his optic discs were normal, and, except for a coarse tremor of his outstretched hands, which was more marked on the right, and a questionable weakness in dorsiflexion of left wrist and foot, he showed no physical signs. Mentally, however, he was dull, slow in his responses and apathetic. He was subsequently admitted for investigation. The W.R. was negative and the X-rays showed nothing abnormal. His headaches became more severe, swelling of the optic discs developed, and he became very drowsy and dull. The diagnosis was made of right frontal tumour and operation advised. The patient, however, was by this time too stupid to appreciate the advice given him, and the relations refused it. He therefore left hospital on September 23rd.

He was re-admitted a fortnight later, having in the meantime become more drowsy, with definite weakness of the left face, arm and leg. Mr. Donald Armour operated in two stages on October 21st and 28th, and removed a tumour the size of a duck's egg from the right frontal lobe. This was superficially situated with its long axis in the vertical direction and extended backwards almost to the fissure of Rolando. It was found to extend deeply into, but to be fairly well delimited from, the hemisphere, and was completely removed as far as could be seen. Microscopic section of the growth shows it to be a glioma.

Immediately after the operation the patient had an almost complete left hemiplegia, from which, however, as you see, he has now entirely recovered.

Mentally, he is now bright and active, and quite up to the average level of intelligence for his walk of life. Nothing is more striking than the complete change, not only of his mental state, but his facial expression, which before the operation was dull and heavy, and is now alert and lively.

We propose to follow up the operation with deep X-ray treatment in the hope of destroying any fragment of the growth which may have been left behind. You will note that Mr. Armour's bone flap has knit well and that the patient's skull is practically normal.

Our third patient also has fits, which we judge to be epileptic but of a somewhat different character. He is 18 years old, and the story of his present illness begins a month ago with the complaint of frontal headache. This would occur when he woke in the morning, would last an hour or two and then pass off. He describes it as a dull ache. For the past two weeks, until the time of admission, he was free from headache, but during this time he has had three curious attacks. The first occurred when he was cycling. Without warning his right leg suddenly became dead and limp. He stopped and tried to walk to some railings, but the leg collapsed under him. In the course of a few minutes the strength had returned to it, and in ten minutes from the time of onset he was quite himself. There was no disturbance of consciousness with the attack. The subsequent attacks have been of a similar nature and duration, except that in one of them the weakness of the limb was associated with a sensation of pins and needles. On being questioned he admits that each of the attacks has been preceded by a momentary sensation of twitching in the muscles of the limb affected.

On examination, we find a slight weakness of the right side of his face and a relative increase in the tendon jerks of the right lower limb.

The attacks which this patient describes represent a somewhat rare form of epileptiform disturbance arising in the motor cortex. In the more usual variety of Jacksonian or focal epilepsy the outstanding feature of the attack is the convulsive jerking of the limb or limbs involved, which spreads from one group of muscles to another, lasting sometimes for a few seconds, sometimes for several minutes, and leaves in its wake a paralysis proportionate in its duration to that of the convulsion. Consciousness is often preserved during such an attack. In the case before us we have the somewhat rare phenomenon of temporary paralysis with little or no preliminary convulsion. Nevertheless, our experience entitles us to regard the phenomenon as epileptic and as indicating a disturbance of function in the upper part of the left pre-central gyrus.

It is the associated story of headaches and the presence, some days after the last attack, of physical signs indicating an organic lesion of the motor cells or fibres which in this case furnish presumptive evidence of a tumour in the situation described.

Our last patient presents a different picture. His is the story of a gradually progressive weakness of the left side of his body, and especially the left arm. He is a man of 56, whose only past illness of importance has been tuberculous disease of the right elbow, for which the joint was excised at the age of 14. The weakness of his left hand was first noticed at his work three months ago. This has very gradually progressed until, as you see, the arm is now helpless. In addition, about six weeks ago he experienced occasional twitching in the left side of his face, weakness of his left leg and some frontal headache.

On examination, we found that he was mentally somewhat dull. The optic discs are normal. He has, as you see, a marked weakness of the left lower face. The left upper limb is almost completely paralysed and, although the muscles do not show any appreciable spasticity, the tendon reflexes are brisk, indicating an upper neuron lesion. The left lower limb shows a slight degree of weakness, especially in dorsiflexion of the foot, and the plantar response on the left is extensor. There is no sensory loss.

Here, then, we have a left hemiplegia with severe involvement of face and arm, but relatively little weakness of the leg. This points to a lesion of the upper neuron tract at a point at which its fibres are relatively widespread—that is, at or near the motor cortex. At any lower level the pyramidal fibres are so closely gathered together that face, arm and leg tend to be uniformly affected. The absence of fits in this case may be taken as evidence against a cortical lesion. The localisation is, therefore, probably sub-cortical. There is no sensory involvement. Therefore the lesion does not extend in a backward direction beyond the plane of the Rolandic fissure. We may therefore presume a sub-cortical lesion of the right frontal lobe extending backwards as far as the pre-central gyrus, and situated midway between the border of the brain above and the Sylvian fissure below. The onset of the paralysis has been too gradual to be caused by a vascular lesion (embolism, hæmorrhage or thrombosis), there is no evidence to suggest an abscess or a traumatic subdural hæmatoma, the W.R. is

negative and there is no history of venereal infection. The cause, therefore, presumably is a tumour. We have not forgotten the possibility of tuberculoma, in view of his past history, but such a lesion at his age is so rare that we must not take it very seriously into account.

We are in rather a quandary with this patient. His bronchitis and emphysema render him a most unsuitable case for operation, and a sub-cortical situation of the tumour would involve such damage to the cortex in its removal as would probably leave him hemiplegic. He seems to be improving, and, in view of the fact that there may be considerable periods of remission in the evolution of these growths, we are inclined to await events rather than press operation at the moment.

As a general rule, however, the right course to pursue in the case of a tumour which can be localised with reasonable certainty and whose situation thus determined appears to be superficial is to advise an exploratory operation. It is true that the mortality of these operations is high and the number of tumours which can be successfully removed is small, but there is no alternative which offers any prospect of cure, and it is only by consistently following the course which I have advised that you will sometimes be instrumental in securing such an excellent result as that illustrated by the second patient I have shown to-day. We hope always that the superficial tumour will prove to be an endothelioma—outside the brain, not of it. But even if it is not, the experience of the past 15 years has shown that many of the more chronic varieties of glioma are circumscribed tumours and may be completely removed, in some cases, apparently, without recurrence.

The Physical Society

A CLINICAL Meeting was held on the evening of Thursday, December 11th, Mr. J. Croot taking the Chair. He had collected some very good cases, and the meeting, on the whole, was very successful.

Mr. TAYLOR showed a middle-aged woman who was born in a deformed condition, and now was suffering from vomiting, increasing pain in the limbs and deafness.

Mr. J. Miller put forward two diagnoses, one of parathyroid tumour, the other of congenital syphilis, and in this latter diagnosis he was supported by Mr. Radcliffe, who pointed out that the periostitis seen in the X-ray plates of the woman's long bones would fit in admirably with a diagnosis of syphilis.

Mr. Shone brought forward another point against the diagnosis of parathyroid tumour in the fact that the deformity was congenital, and he was inclined to believe that the woman was the victim of renal rickets.

Mr. Gilchrist asked the last speaker why he should specify the type of rickets, and suggested that the condition might equally well be of the ordinary type or of the cœliac type. Mr. Shone, as is his wont, vigorously defended his diagnosis.

Dr. R. E. Smith believed that the woman might simply be suffering from that very ordinary disease, rheumatoid arthritis; and Mr. Taylor, in conclusion, thought that the condition was one of osteogenesis imperfecta, complicated by a secondary arthritis.

Mr. BLOOM described the case of a woman who suffered from attacks of diarrhœa, for which she had been treated at another hospital by colon wash-outs and by the injection of serum. Dr. Hurst had performed a sigmoidoscopy, and had been able to demonstrate the presence of some white scars in the mucous membrane of the colon. The speaker himself favoured the diagnosis of fermentative diarrhœa.

Mr. J. C. Colbeck, in a few delightfully naive remarks, pointed out a few inaccuracies in Mr. Bloom's presentation of the facts, and dismissed the small amount of rectal hæmorrhage which had occurred, as a "red herring drawn across the path," a simile which caused great amusement.

Mr. Shone felt that the presence of scars in the mucous membrane and the clinical history of the patient were enough to found a satisfactory diagnosis of ulcerative colitis; and, in view of some old healed foci seen by X-ray in the pulmonary apices, he suggested that the colitis might possibly be tuberculous. This aroused the indignation of several members, not least of these Mr. Bloom, and, after the little storm had subsided, an insistent voice was heard harping on the possibilities of uræmia and even of submucous lipomata.

Mr. EVANS showed a middle-aged man, a brass smelter, whose teeth in the left lower jaw had dropped out after two months of pain and bleeding from the gum around their roots; and the man now had an excavated ulcer with expansion of the jaw. X-ray showed a clear-cut absorption of bone with no regeneration.

At the words "brass smelter," Mr. Shone could scarcely be held down in his chair, and, as soon as Mr. Evans had finished his remarks, he leapt to

his feet and said, as most of us wanted to say, that the man was suffering from the effects of exposure to metallic fumes inhaled during his work.

Mr. Todd, however, would have none of this. His diagnosis was epithelial odontome, malignant in character, with secondary deposits in the submaxillary glands. Mr. Miller suggested a carcinoma of the floor of the mouth, with secondary septic glands, and Mr. J. Croot thought the ulcer was a malignant epulis. Many speakers, including Mr. Bigby and Mr. Stevenson, supported the diagnosis of a malignant ulcer, the latter speaker stressing the value of induration of the surrounding tissues, and the tethering down of the tongue as important confirmatory evidence.

Mr. Shone was still firmly convinced of the rectitude of his own diagnosis, and, even when Mr. Evans told the meeting that the X-rays and microscopic section both showed a typical epitheliomatous ulcer, he did not seem perturbed.

Mr. T. F. Todd told us of a boy who had been decompressed by the left subtemporal route for unconsciousness following a blow on the left side of the head. He was left with aphasia and right-sided hemiplegia, the former of which had gradually cleared up. At the operation no extra-dural or subdural hæmorrhage could be found.

Several speakers were in favour of a subdural hæmorrhage, which had clotted and could not therefore be found in needling the brain. Mr. Bloom thought that the hæmorrhage might have occurred into a previously unsuspected glioma. Mr. Shone and Mr. Bigby agreed that the cause of the hemiplegia was bleeding into the brain substance, which had been overlooked, as was only to be expected, at the time of operation.

Mr. E. Atkins showed a man of middle age suffering from cough, weakness, wasting and dyspnœa. He had cyanosis of the head and neck, and there were large dilated veins coursing over the surface of the chest and the shoulders. The right side of the chest moved little, if at all, on respiration, and was dull to percussion with absent breath sounds, and his Wassermann reaction was ++.

Diagnoses were made rapidly by various speakers —generalised fibrosis due to syphilis by Mr. Gilchrist; chronic pleurisy with calcification by Mr. Taylor; carcinoma of the bronchus or endothelioma of the pleura by Mr. Shone; hydatid cysts by Mr. R. Smith—but the general consensus of opinion at the meeting was in favour of Mr. Atkins's summing-up of the case as one of carcinoma of the bronchus. (This was verified a few days later by an autopsy.)

Mr. Fitzgerald, before describing his case, suggested to the meeting that diagnosis on clinical history alone was neither so easy nor so infallible as some teachers would have us believe. The patient, who had behind her many years of ill-health taking the forms of pain after meals and hæmatemesis, now was suffering from pain in the epigastrium one hour after meals, from vomiting and from constipation. On this history he invited the meeting to give a diagnosis.

Mr. Reading pointed out the signs in favour of a gastric ulcer, the occurrence of the pain at fixed intervals after meals, the vomiting, the periodicity of the pain, and the occurrence of hæmatemeses. Mr. Shone amplified this by suggesting that the ulcer might have turned malignant. Mr. Todd then attempted to tell Mr. Bigby a few home truths about the uterus in general, and about the frequency with which the retroverted uterus caused constipation. He spoke with a conviction which was not shared by those who had done their course in gynæcology.

Mr. Fitzgerald finally produced an X-ray photograph of the stomach, and displayed an "hour-glass" stomach with no ulcer visible.

The last case was demonstrated by Mr. Curtis. This was an old man who had been admitted for injuries to the head which he had received in a fainting fit. On admission, he had a left extensor plantar response and all the signs of aortic stenosis, with a negative Wassermann reaction.

Mr. Shone did not think that on his findings that evening a diagnosis of aortic stenosis was possible, and he thought that the persistence of the left extensor plantar was produced by a small patch of thrombosis over the corresponding cortical area.

Several speakers were in favour of a simple fainting fit, but when Mr. Colbeck took Mr. Shone to task for not having performed a viscosity test on the blood, he was met with a homely retort from that gentleman and with a diatribe by Mr. Reading against the dangers of clouding one's natural commonsense with the mud of academic nonsense.

Dr. R. E. Smith agreed that the cardiac signs had changed considerably since the patient had been in the hospital, and he was inclined to a diagnosis of atheromatous thickening of the aorta and sclerosis of the valves with temporary cerebral anæmia.

Before the meeting closed, a motion to thank Dr. Hampson for the good offices which he had rendered to the Society during his service as Secretary was carried with unanimous enthusiasm.

Exodontia

A Paper read before the Dental Society by Mr. J. A. Carleton Hunter, L.D.S.

MR. PRESIDENT and GENTLEMEN,—There are few operations in minor surgery which excite stronger feelings of dread, and to which most persons submit with greater reluctance, than the extraction of a tooth. This was understandable a century ago, when one person played the dual role of dentist and blacksmith. Records show that in not a few cases an unfortunate patient requiring the removal of one molar tooth was relieved of five other teeth, together with the floor and anterior and posterior walls of the antrum. A present-day operator with his knowledge, his instruments, the high standard of anæsthesia attainable, and having the help of X-ray, should be able to perform the most difficult extraction successfully and painlessly.

Although the patient may be suffering agonies when he presents himself, it is fear magnified by his imagination which dominates his mind. It therefore behoves the operator to pay particular regard to the psychological aspect and to reassure the patient, not only by seeking to allay his fear of pain with words of sympathy and encouragement, but also by his general deportment and calm confidence. Further, the absolute cleanliness and perfect order of the surgery, which should exhibit nothing likely to cause dismay, should help to create an impression on the patient that the whole of the dentist's skill and resources are available for his benefit.

Where it is feasible to have a room specially devoted to extraction work, it is a great advantage. A patient during the induction of N_2O may become excited, and in such condition is capable of doing no little damage with his feet, and it is annoying, to say the least, to have the enamel kicked off a good chair or unit, which, except under such conditions, would not be likely to incur such damage. Also, time may be saved, for no patient is willing to leave the surgery with a socket still bleeding, nor would the surgeon wish him to do so. In such an event he could remain in the extraction room whilst the dentist proceeds with his next patient in his other surgery.

As a dental surgeon must ever bear in mind that, generally speaking, the extraction of a tooth is a last resource, he must, in making his preliminary examination, give the most careful consideration to the indications of the case in hand.

In acute conditions such as persistent pulpitis and peridontitis, also teeth involved in a fracture, extraction should be effected, but where extreme cellulitis is present the removal of the cause alone may not be sufficient; then a counter-incision and the insertion of a gauze or rubber drain will also be required to evacuate the pus.

The sub-acute conditions, *e.g.*, supernumerary, retained temporary teeth which retard the eruption of their permanent successors; dead teeth in cases of nephritis or cardiac disorders; unerupted teeth giving rise to nervous reflexes, or any tooth that cannot be made clean or cleansable, especially in chronic Vincent's angina, justify removal.

Orthodontic work is seen at its best when the treatment can be confined purely to extractions.

Isolated teeth in the maxilla will more often than not hinder rather than help the prosthetist, though the retention of even one lower canine or premolar, if in good position, is an untold blessing to the patient. This, however, unfortunately is often not appreciated until after it has become necessary to remove it.

In some patients suffering from certain organic heart lesions the dental surgeon is justified in refraining from the extraction of septic teeth which would otherwise be removed, for, though the patient's expectancy of life may be short, the risk of its possible abrupt termination through the anæsthetic or the shock of extraction is surely more serious than the risk of the effects of the toxic absorption from the teeth and mouth.

In cases of women three to four months pregnant, it must be remembered that there is a possibility of miscarriage resulting from the extraction of teeth, and it is therefore desirable to postpone such extraction to a more opportune time in all cases where pain can be allayed by other means.

Now in regard to X-rays, the routine of X-raying all teeth may at first thought seem unnecessary, by reason of the fact that many teeth may appear to be normal. Despite this, however, there are numerous unsuspected abnormalities, wherein skiagrams may prove of the greatest value. After all, X-rays afford the only way of ascertaining that which lies hidden in the alveolus.

In examining an X-ray, note should be taken of the alveolus, whether it is rarefied or sclerosed; whether it be necessary to remove bone; how much force should be required to dislodge the tooth; and whether there are any buried roots.

The roots should be examined for curves, divergence, cementosis, dilaceration, hooked apices, true or false gemmination, the presence of cysts or necrosis, and the proximity of the roots to the antrum or inferior dental canal.

The skiagram should be carefully examined for possible distortion and due allowance made, but if it is desired to localise a lower wisdom tooth,

any film showing overlapping contact points between the lower 6 and 7 should be discarded, as it is useless.

Let us now consider Pre-Operative Treatment. Where the mouth is dirty, and the condition is not acute, the teeth should first be scaled and the patient put on an astringent mouth-wash.

Often one of the greatest difficulties of an extraction is nervousness in a patient. In such cases the pre-operative administration of bromides is especially beneficial, and for highly neurotic people allonal, luminol or morphine, gr. 1/6, will prove more effective.

Where there is a history of liability to excessive hæmorrhage, the adminstration of calcium lactate for 14 days previous to extraction is of doubtful value, but when a patient is known to be a hæmophiliac or suffering from Hodgkins' Disease or scurvy, 2 c.c. of hæmoplastin or prothrombin will produce very positive results. If patients are known to be alcoholics, excessive smokers, or drug takers, endeavours should be made to persuade them to reduce the quantities consumed.

The prevention of pain is the moral obligation of the operator, and he should use an anæsthetic that is devoid of danger and complete in its action.

Locals are contra-indicated in children when, though the extraction may be physiologically painless, fear nevertheless makes it psychically painful.

An assortment of mouth props, tongue forceps and two pairs of Mason's gags are required, in addition to a set of forceps which may comprise the following :—

(1) Breakbacks.
(2) Right and left full molars.
(3) Bayonets, fine and heavy.
(4) Fine and heavy upper straights.
(5) Lower fulls.
(6) Fine and heavy lower roots.

These should carry the average dentist through, and he should aim at becoming the master of a few forceps rather than the slave of many.

The requirements of these forceps are that they should :—

(1) Hold the tooth firmly—for they are no more than a handle ;

(2) Be so constructed as to make pinching of the lips almost impossible ;

(3) Have easy but not loose working joints ;

(4) Have sharp blades which should not bend or snap under strain ;

(5) Have handles which fit the hand comfortably and clear lips when in place.

As a whole, the forceps should not be too heavy.

Five elevators should suffice, *i.e.*, a straight, and a right and left pointed angle, and a pair of Warwick James ; a corkscrew handle gives a good grip, with added leverage when required, for rotation. It is absolutely essential that they should have sharp edges.

For the removal of impacted wisdom teeth, special elevators of the Winter or Barry pattern will facilitate matters.

For surgical removals some of the following additional instruments will be required : chisel, Rougeur forceps, surgical burrs, gum scissors, scalpels, periosteal elevators, flap retractor, Spencer-Wells, needle holders, silk sutures, curved needles, sterile gauze sponges, and towels.

Sterilisation of all sharp instruments is done in surgical spirit, whilst all other instruments are boiled for at least seven minutes.

Before proceeding with any extraction see that any removable piece of bridge work or denture is taken out ; then take another look at the mouth and decide in what order the teeth are to be removed. If upper and lower are to be cleared at one sitting, the lowers should be removed first, as this will give you a clear view of the lower unobstructed by any blood coming from sockets in the maxilla. Commence at the back on the opposite side to which the prop is inserted, and working forwards to, shall we say, the canine on the opposite side. Thereafter remove the uppers, starting on the same side and terminating approximately at the same point. Here the Mason's gag should be applied on the side from which the teeth have been taken, the prop removed, and the operator starts from the back and extracts the remaining teeth.

If the mouth has to be cleared, but not rapidly, a good plan is to take the upper cheek teeth on one side at, say, two sittings, and the corresponding lowers at two further visits, leaving the patient the teeth on the other side to masticate with whilst the gums heal. Repeat the performance on the other cheek teeth when the first side has healed. The patient then appears with the six upper and lower anterior teeth and firm gums. Impressions and bite can easily be recorded and temporary dentures made to be inserted immediately on removal of the front teeth—a thing much appreciated by patients.

Where marked sepsis is present and multiple extractions would cause a flare up in the patient's condition, it is as well to remove uppers first and allow sockets to drain and heal, for in so doing the discharge from above does not collect in the empty sockets which would otherwise be left in the mandible.

Each tooth should be removed in its entirety before proceeding to the next.

The fracture of teeth during operation may be caused by wrong forceps or force being applied too suddenly or the forceps incorrectly applied. If operating under gas, and you decide it is a case for a local, take a barbed broach and remove the exposed pulp before the patient comes round, and so reduce the after-pain to a minimum.

POSITION OF THE PATIENT

The patient should be seated in the chair upright, with the head and body in alignment; the feet should be flat on the floor on either side of foot-rest and the fingers interlaced. The posture should not be strained, and, if it is possible, get the patient to relax—for with relaxation comes calm. A pelvic strap should be insisted on when gas is given. A sterile towel covers the front of the patient, rendering the field as aseptic as possible, and also protects the clothes from blood-stains. A comfortable mouth-prop is inserted, and, if the anæsthetist is a good one, you will notice he keeps a gentle supporting finger under the mandible to prevent the prop slipping during the induction of anæsthesia. The removal of the gag as the patient is regaining consciousness is to be deprecated, for it may cause him to think it is the last tooth being extracted; also its retention tends to prevent swallowing of blood.

For the removal of the superior teeth the chair is raised until the top of the patient's head is on a level with the shoulder of the operator, who should stand in front and to the patient's right. The thumb and index finger should be placed one on the palate and the other in the buccal sulcus in such a manner as to embrace the alveolus. The finger (or thumb) placed in the buccal sulcus should endeavour to raise lip and retract cheek, so as to give the clear view of the field which is so essential to a successful extraction.

If the operator wishes to hold the patient's head himself, the first and second fingers must be used and the head be placed in the crook of the arm. This has the advantage that, when the dentist is extracting single-handed under a local anæsthetic, he is able to prevent over-extension of the neck, counteract the force with which he is driving up the forceps, and generally have more control over an obstreperous patient.

The chair should be at such a level as to bring the patient's head to the height of the exodontist's elbow when mandibular teeth are to be removed. In extracting the teeth on the patient's left, the index finger of left hand should be in the buccal sulcus, the second finger holds the tongue to one side, whilst the thumb placed under the chin firmly supports the jaw and at the *same time pulls it forwards*. The dentist should take up his stance as before, facing the patient and to his right.

For the removal of teeth on the right side of the mandible there are two techniques. In one the operator faces, and in the other he is behind the patient. In the former, the position is the same as for the left side except for the fact that the right hand performs the functions of the left, whilst the extraction is done with the left. This may sound difficult, but, from personal experience, I may say the art of left-handed extraction is not difficult to acquire. It has the advantage of allowing the anæsthetist full scope in which to perform his important task, and the general command of the patient is easier. After all, extraction is mainly wrist-work, and in this there is little difference between the right and left hands.

The other way is to stand behind the patient, placing the thumb of the left hand on the tongue to hold it away from the alveolus, and with the first finger in the buccal sulcus and the remaining fingers supporting the jaw, the forceps are applied with the right hand. The disadvantages of this method lie in the fact that the anæsthetist does not see much of his patient, thus making the application of the Masons, etc., more difficult. Moreover, the operator does not have nearly such a good view of the tooth he is dealing with.

The forceps should be held in the palm of the hand with the ball of the thumb lying between the handles to act as a guide and to help drive home the blades. In the maxillary teeth the thrust is delivered mainly by the palm of the hand, whilst in the mandible it is by the thumb; a quite legitimate practice is to augment this by using a finger or thumb of the other hand. Once applied correctly, the handles must be grasped firmly, for any lateral movement tends to open the blades.

Elevators should be grasped in the palm of the hand with a finger and thumb along the shaft to steady it. The function is to apply a direct thrust at one point, and with this in mind, it will be seen that the handle of a curved elevator should trace out a circle and not be merely rotating, or else the blade will not maintain a constant relation to the tooth, which in its turn would be driven towards a side of the socket. This instrument causes a minimum amount of bone destruction. Care should be taken to ensure that no damage is done to any teeth or the alveolus which is used as the fulcrum, as all extractions should be performed with a minimum amount of trauma to the surrounding tissues, in order to prevent lowering of their resistance and their healing properties. Should any gum adhere to the tooth, let it be removed

with a scalpel or gum scissors. Unless unavoidable, only the tooth should be included in the beaks.

The aims of every extraction are :—

(1) Obtain a firm hold ;

(2) Dilate the socket, during which the fibres of the periodontal membrane are ruptured ;

(3) Pick out the tooth.

For this to be carried out successfully the operator must have a clear mental picture of the tooth and its anatomical relations, also a clear view of the tooth. There are but few teeth actually locked into the skull by curved roots, and these can only be removed whole when pathological changes have taken place in the surrounding bones. Dense bone always fractures teeth of abnormal morphology, this being no reflection on the operator's skill. Force of any kind should be applied gradually, steadily and deliberately so as to transmit a corresponding force to the socket and not merely to fracture the root.

When working under gas or a general anæsthetic it is as well to pack the fauces to prevent the inhalation of blood or foreign bodies into the larynx or trachea, which inhalation might lead to sequelæ of sickness of a septic bronchial pneumonia. Under nitrous oxide a taped marine sponge serves the purpose well, but unless it is pushed well to the back of the mouth it will prove to be a hindrance and a danger. To save the counting of sponges when the patient is under ether a length of ordinary 2½-in. bandage to block off the oral cavity functions very well, and it can easily be withdrawn and renewed as required. All this is unnecessary with local anæsthetics, as the patient's cough reflex will be functioning normally.

Immediately prior to extraction some surgeons like to swab the area to which they propose to confine their activities with tincture of iodine in order to reduce the number of organisms present.

THE MANDIBULAR TEETH

The mandibular third molar, when in a normal position, is one of the easiest teeth to remove. A straight spear-point elevator should be driven—the flat side towards the tooth—in between the root and the alveolus and rotated, using the alveolus as a fulcrum, so that the sharp edge bites into the cementum. This is repeated until the tooth is exfoliated, when it may be picked out with forceps. Under no circumstances should the second molar be used as a fulcrum.

Unfortunately, the normal eruption is frequently interfered with either by arrested development or lack of normal growth of the mandible, resulting in impaction with the adjoining tooth or the ramus of the mandible.

There are three types commonly met with : the vertical, the mesio-angular, and the horizontal, though the number of variations is legion ; consequently, in this paper I cannot go deeply into the subject.

The removal of these teeth calls for a surgical extraction, and, as in other bone operations, aseptic precautions should be taken, for, although the patient has a natural immunity to the bacteria in his own mouth, the introduction of foreign bacteria can have serious consequences.

First make a careful clinical examination of the tooth ; valuable information can often be gleaned from the corresponding tooth on the other side, for the conditions are frequently bilateral and more of the other tooth may be visible to guide you. Note, too, the condition of the crown of the second molar, its supporting structure, and whether it has any large filling which might be damaged. From the X-rays observe the position of the tooth, the amount of bone covering it, and the general strength of the mandible. Whether or not the mesio-buccal surface is accessible is determined from the occlusal film. Also observe whether the tooth lies in actual relation to the inferior dental canal, or is it merely superimposed upon it ? (I might mention I have removed four impacted wisdom teeth showing grooving of the roots by the canal.)

In making the vertical incision be sure to keep well out to the buccal side of the retro-molar fossa, for in so doing you will avoid those small arterioles going to the tonsil. Hold the cutting edge of the scalpel upwards and cut from the distal-buccal corner of the second molar vertically up the ramus, make another incision from the buccal sulcus to cross the first at right angles (Fig. 1).

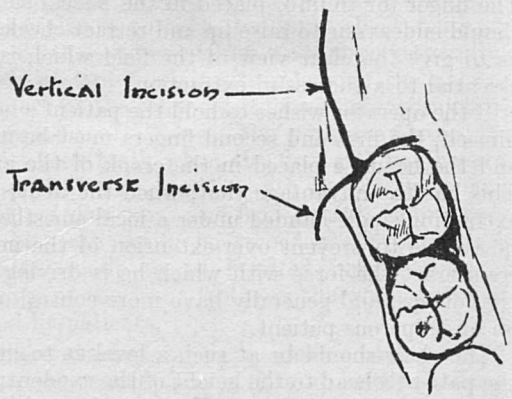

Fig. 1.

With a periosteal elevator—a hospital pattern angle elevator is an excellent substitute—turn back these flaps. They can be held out of the

way with a stitch by the weight of Spencer-Wells on the end.

The removal of bone can be effected with mallet and chisel, hand-chisels or burrs. The former in skilful hands undoubtedly gives the best results, but in the burr the average dental surgeon is using an instrument over which he has complete control and in the use of which he has absolute confidence. It is therefore probably the safest. Also the specially designed exolevers now available make your task easier in removing the tooth.

As the vertical type of impaction is in the majority, let us first deal with this condition. Bone should be removed distally, sometimes buccally, until the bulbous part of the crown is freed. Then drive an elevator vertically downwards at the mesio-buccal angle, and its wedge-like action will raise the tooth (Fig. 2). If its action

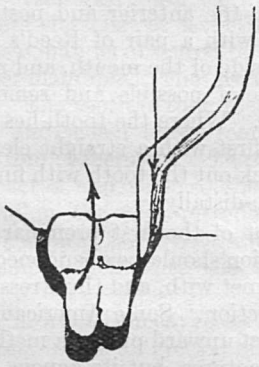

Fig. 2.

is not complete an angle exolever should be applied from the buccal aspect and engaged in the bifurcation of the roots and rotated, using the external oblique ridge for a fulcrum to produce the tooth (Fig. 3).

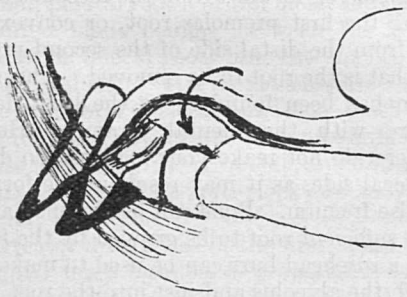

Fig. 3.

The mesio-angular type, where the occlusal surface becomes locked under the bulbous part of the second molar, is familiar to most of you. In all these cases your object is to create space, therefore you proceed to remove some bone distally in order that with your elevator you may displace the tooth backwards and upwards. The amount of bone you remove can be lessened if a burr is taken and that part of the wisdom tooth in contact with the molar in front cut away. The elevator is applied to the mesio-buccal angle, driven downwards and slightly lingually, and then rotated (Figs. 4 and 5).

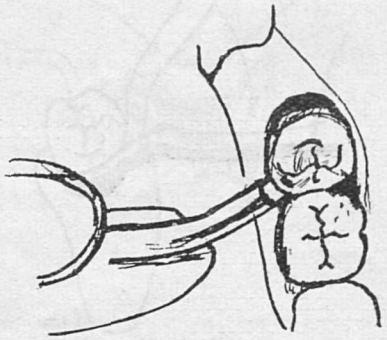

Fig. 4.

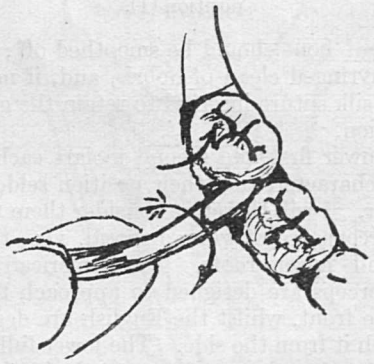

Fig. 5.

The horizontal impaction is usually the most difficult to deal with, but scientifically-designed exolevers simplify the operation considerably. Free the bone well distally and buccally, then apply the elevators by insinuating the blade under the mesial side of crown and, with a downward and forward movement, release the lock, after which some rotation will produce the tooth (Figs. 6 and 5).

Should extraordinary resistance be met with, it may be due to an abnormally thick septum between the roots; this can be weakened with a burr.

Boyd-Gardner's technique is to create space by removing the crown of the left lower 8 with one tap of a chisel placed on the ameilocementinal junction, thereafter with an angle elevator, removing the roots forward and upwards into the space previously occupied by the crown.

As no two cases are exactly the same, your technique will differ and your operation will probably become a combination of the aforementioned methods. In all cases, any sharp

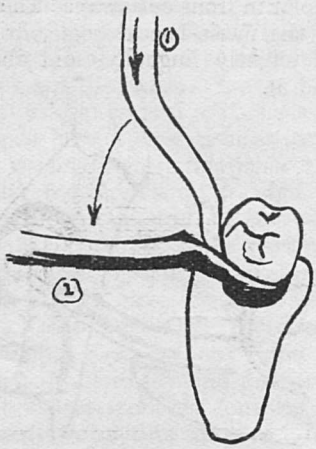

Fig. 6.
Section through mandible distal to second molar. Shaded area occupied by crown when elevator is on position (1).

spicules of bone should be smoothed off; and the socket syringed clean of debris, and, if necessary, a black silk suture inserted to retain the gum flaps in position.

The lower first and second molars each present similar characteristics, their position seldom being irregular. I will therefore consider them together. Two forceps are at your disposal, viz., the lower fulls and lower roots. The American pattern lower forceps are designed to approach the tooth from the front, whilst the English are designed to approach it from the side. The lower fulls should, for preference, be used on teeth implanted in young or soft bone, as it is not difficult to shear off the crown with them. These forceps grip the tooth well, and the points on the blades come into apposition with the bifurcation of the roots.

The universal forcep for the mandibular teeth is the lower roots. This should be applied to the anterior root and driven well down, firmly grasped, and an inward and outward movement made until the tooth is loose, when it is withdrawn in a buccal direction.

A tooth with divergent roots and no pathological condition of the surrounding bone is very liable to fracture. Should the crown come off, leaving the roots joined, always try to extract them with full forceps first; should this fail, then separate them either with burrs, chisel or root-splitting forceps. Then remove the easiest root with forceps, introduce an angle elevator into the patent socket, make a circular sweep so that the point, after having removed the septum, elevates the root. Another method is to push the root into the vacant socket by introducing an elevator between the root and the socket wall. Sometimes just a small part of the end of the root will snap after the tooth is moving well; this fragment can often be produced by first clearing all blood from the socket and then taking a straight probe or barbed broach and pushing it firmly into the root canal.

The second premolar may be fully rotated, once it has been grasped in a pair of fine roots; a minimum amount of lateral movement should be used. The early removal of a temporary molar will frequently result in the impaction of the lower 5. If taken early enough, the removal of the lower 4 will allow the lower 5 to erupt in good position and close up any gap. However, where this is not done the tooth becomes lingually or buccally displaced. If the displacement is towards the tongue, grasp the anterior and posterior surfaces of the tooth with a pair of Reed's forceps, from the opposite side of the mouth, and rock the tooth gently, rotate if possible and remove, following the long axis. Where the tooth lies to the buccal side, ease it first with a straight elevator from in front, and pick out the tooth with fine root forceps applied mesio-distally.

As the root of the first premolar is sometimes curved, rotation should be abandoned where undue resistance is met with, and the stress applied in an outward direction. Some American surgeons advocate a direct upward pull as a method producing the fewest fractures, but its danger appears to lie in possible damage to the maxillary tooth. Owing to the length of the premolar roots and the thickness of the bone, fractures of these teeth are not uncommon. Bearing in mind the position of the mental foramen—between the lower 4 and 5, when removing the root surgically—make a curved incision convex forward from the mesial side when tackling the first premolar root, or convex backwards from the distal side of the second premolar when that is the root to be removed. This shaped incision has been found to be the least liable to interfere with the mental foramen. Here, as elsewhere, do not make your incision too deep on the buccal side, as it may result in the formation of a false frænum. Bone can be chiselled away to expose sufficient root to be gripped by the forceps, or else a rosehead burr can be used to make a hole through the alveolus and just into the root to give access to the point of a sharp elevator.

With the removal of lower canines great care must be taken not to injure the laterals or fracture the thin external plate. The implantation of these teeth is very firm, and some considerable force will be required to move it, so drive the

forceps well down and rock it in and out. When some movement is obtained, slight rotation may be tried; should any resistance be met with, it should be abandoned. The muco-periosteum has a tendency to adhere to the lingual side, and, if torn, much after-pain results.

Centrals and laterals must not be rotated, and, if only one has to come out, it must be removed vertically, upper straights being quite useful. This region is frequently overcrowded, and special forceps—of hawk's-bill pattern—are made with one blade smaller than the other, so as to avoid impinging on adjacent teeth.

THE MAXILLARY TEETH

The upper wisdom teeth may be taken out with breakback or bayonet forceps, which are so designed as to enable them to be applied without coming into contact with lower teeth. The application of these forceps is sometimes difficult because the view may be obscured by the coronoid process of the mandible. The palatal blade is adjusted first. The tooth is then rocked medially and laterally, and, when loose, removed with a twist away from tuberosity. These teeth are sometimes impacted, and, when so, the gums should be lanced to allow the easy introduction of the forceps, which should be driven well up. Grip firmly and remove, following the line of least resistance.

If the molar in front is decayed its removal first will greatly assist in the extraction of the wisdom. The anatomical relations of this region are important, for it must be remembered that the antrum lies in close relation with the roots of the two premolars and three molars.

The second molar is three-rooted, the two buccal roots being slender and usually not very divergent. Bayonet forceps may be applied to the anterior buccal and palatal root; or full molar forceps with the pointed blade coming between the anterior and posterior buccal roots and the smooth blade on the palatal side. The movements are those to produce a lateral dislocation. The tooth when loose is removed downwards and outwards with a clockwise motion for the right side, and downwards and outwards with an anti-clockwise movement for the left-hand side.

The greater divergence of the first molar makes it a slightly more formidable proposition, but the forcep technique remains the same as for the other molar. Where you are unfortunate and succeed in only removing the crown, first try full forceps, then separate the roots and remove them singly. In doing so apply your forceps sufficiently wide, to avoid driving on to the end of the root and the risk of pushing it into the antrum. If you leave one of the buccal roots behind it is permissible to introduce one blade into the palatal socket and the other under the muco-periosteum and include a small piece of the alveolus between the beaks. The diagrams 7 and 8 show the procedure should the palatal root and one or both buccal roots be *in situ*, but separated.

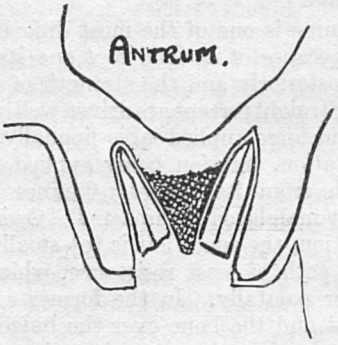

Fig. 7.
Remove septum between roots (shaded area) with burr or chisel.

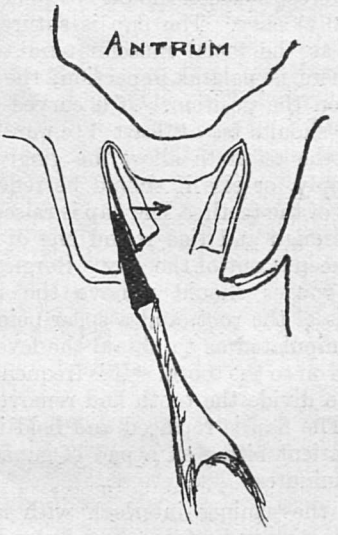

Fig. 8.
Introduce spear point elevator and tilt from socket.

You have the choice of straights, Reeds or bayonets when you remove the bicuspids, but whichever forcep you use, make sure the blades are on the long axis of the tooth. It is extremely easy to apply Reeds obliquely across the root, and I think that is why they are regarded with some disfavour here. The movements should be first inwards, then labially; no rotation can be used because of the flat root of the upper 5 and the slender double roots of upper 4.

When the tooth is misplaced, it is generally palatally. It may then be loosened with an angle elevator—using the palate as a fulcrum—and picked out with forceps. Removal of some bone often facilitates matters, though the alveolus is usually thin.

The canine is one of the most difficult teeth to extract, because of its long root and its thickness anterio-posteriorly and the strength of its attachments. Straight forceps are driven well up, grasped firmly, and force applied labio-lingually with very slight rotation, traction being applied to remove the tooth from its socket. Canines are fairly frequently malplaced or impacted. Owing to their late eruption, the space left is too small, and they take the path of least resistance, which may be labially or palatally. In the former case, a box flap is cut and the bone over the bulge removed, and, if on the right side, a straight elevator may be applied distally, or, if on the other side, mesially, avoiding other teeth, which on no account should be used as a fulcrum. This usually makes delivery with the forceps (which should be applied mesially and distally) easy. The flap is sutured back in position, as the facial muscles tend to drag it. Where there is palatal impaction, the operation depends on the position. If a curved incision is made, it should be at least 1 c.mm. from the necks of the teeth to allow the gingivæ a good blood supply, or else it should be reflected from the necks of the teeth. The flap is raised, a suture passed through and tied round one of the cheek teeth to keep it out of the way. Surgical burrs or mastoid gouges should remove the bone over two-thirds of the root, and a spear-point elevator be so manipulated as to obtain the leverage from the palate on to the tooth. It is frequently advantageous to divide the tooth and remove it in two pieces. The flap is replaced and held in position by the patient biting on a pad of gauze for from 10 to 15 minutes.

Where the canines interlock with any tooth, half the tooth can be taken labially and the other half palatally, and this, if carefully done, will not necessitate the removal of other teeth. In a bilateral palatal impaction, care should be taken to preserve the median ridge of bone as removal causes a deformity of the palate.

Laterals should be taken out carefully with fine-beaked forceps, as the bone surrounding is thick and the root rather small. An in-and-out motion with no rotation will deliver the tooth.

Centrals are ideal teeth to rotate, and with a turn of the wrist, some lateral dislocation, coupled with slight pull, the tooth is out. The roots of both the centrals and laterals are never curved, and the only abnormalities in this region are crowding and torsion; in the latter case, removal of part of the external alveolar plate helps materially. Where the roots have been reamed for crowns the forceps must be driven well up, and only sufficient pressure exerted on the handles to hold the tooth.

In removing children's teeth, never drive the forceps deeply or you may injure the permanent successors. On the other hand, as the roots are widely divergent and frail, and also may not have absorbed, do not snatch at them.

All operators are liable to meet with occasional mishaps, some of which might have been avoided. For instance, the insertion of a Mason's gag calls for great care, as otherwise it may not only cause severe laceration of gums and lips, but can even dislocate the teeth or mandible if incorrectly placed. Again, too much zeal on the part of the operator in extracting a difficult lower tooth may cause the condyle to come over the eminentia articularis.

Should you fracture the tuberosity or otherwise open the antrum, remove any small loose pieces of bone, suture the gum together, and place a wad of cotton-wool over the aperture until a clot forms. Under no circumstances syringe out the antrum. Should a root be forced into it, turn the patient over to an oto-rhino laryngologist.

The lingual nerve is liable to be damaged when using forceps on a lower 8. Damage to the mandibular nerve is made manifest by anæsthesia of that side and dribbling of saliva. When a lower 8 is loose and disappears, remember the possibility of having pushed it between the inner plate and the superior constrictor.

Should you feel convinced your patient has inhaled any foreign body, have the chest X-rayed and turn him over immediately to an expert laryngologist.

It occasionally happens where an operation is of a prolonged and difficult nature, the patient will collapse from surgical shock. Treatment must be carried out rapidly, 5-10 mm. of a cardiac stimulant such as strychnine or ether should be injected and the patient kept warm and with the feet raised.

The sudden cerebral anæmia of psychic shock can soon be overcome by lowering the head between the knees and administering spirit of ammonia.

POST-OPERATIVE TREATMENT

There is bound to be some after-pain and swelling following any extraction. This can be minimised by the application of ice packs for a few hours. Should the pain persist, its cause must be sought. It may be due to :—

(1) Stripping of the periosteum, which latter should be sutured into place.

(2) Dry socket, resulting from failure to form a good clot. The treatment should be gentle syringing, followed by curetting the socket and surrounding soft tissues.

(3) Fractured tooth with exposed pulp.

(4) Presence of sepsis. This requires constant syringing to maintain good drainage, and hot mouth-washes must be regularly used.

Hæmorrhage is a fairly frequent sequela. Its character and origin should be determined, and whether there is a tendency to clot. Digital pressure on a piece of gauze wrung out in hot water will usually prove effective. Where this is not successful, apply oil of turpentine on a piece of gauze and lay this over the top of the socket. Over the gauze lay a piece of composition and instruct the patient to bite thereon to hold it in place. Then apply a Kelsey Fry bandage to prevent the patient opening the mouth. All will be well if the bleeding point can be secured and squeezed in Spencer-Wells, and, if not, the cautery will coagulate the surrounding tissues and the blood. Packing a socket should be the last resource in any case.

This, gentlemen, brings me to the conclusion of my paper, which I venture to hope has not proved wholly devoid of interest. I thank you for the kind and patient hearing you have been good enough to accord me.

I think you will agree with me that our profession is one of real service to humanity, and that it may be fairly claimed that in modern practice operations for the removal of teeth are a great triumph for human intellect, energy and resource.

Correspondence

Invalid Children's Aid Association

(Bermondsey and Rotherhithe Branch)

To the Editor of the GAZETTE

SIR,—On behalf of the Committee of the above Branch of the Invalid Children's Aid Association I tender you our hearty thanks for your support of the Boxing Tournament in Bermondsey on December 5th last. I have heard to-day that we received £73 nett for our funds. This sum is in part due to the generous donations of good friends at Guy's, one of them an anonymous donor "in memory of A.D.F." We also obtained gifts from friends at the Commercial Union Assurance office, at Hay's Wharf and elsewhere, so that in the end we have been enabled to pay all our incidental and preliminary expenses, and to have a clear £73 to use for the benefit of our children. Every case is investigated carefully, and we attempt to expend our little all to the best advantage of our small clients, but like many societies of this kind it is hard to make both ends meet, and we invariably want more money than we possess.

An increase in the number of annual subscribers, large and small, is what would help us most, and if any of our Guy's friends will join that category we shall be most grateful to them. Possibly the example of the Guy's man who sent me a cheque "in memory of A.D.F." may appeal to others of Sir Alfred's old friends. Sir Alfred was the original Chairman of this Branch, and as we, his old colleagues, know well there was no cause to which he was more attached than that of the Invalid Children.

Yours, etc.,
JOHN FAWCETT.

66, Wimpole Street, W.1.

Post-Graduate Course for G.P.'s

To the Editor of the GAZETTE

SIR,—This autumn I attended a week-end course of lectures given at Mary's for the benefit of general practitioners. About a dozen lectures were given, chiefly by members of the Staff, each one speaking on some aspect of his particular work which would be likely to be instructive to his audience. I came away with a feeling of gratitude to the hospital authorities for the trouble that had been taken, and hoping that the Staff at Guy's would follow their example. There must be a great number of old Guy's men who would welcome a short post-graduate course, which might, perhaps, be held at the time of the Biennial Dinner.

If twelve members of the staff would give a lecture on the points of importance to the general practitioner which have arisen in their own special departments during the last two years, the result should be a compact and exceedingly useful post-graduate course.

Yours, etc.,
R. A. FAWCUS.

Chard,
Somerset.

Guy's Hospital Gazette

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Reviews

The Morphine Habit and its Painless Treatment. By J. LAUGHTON SCOTT. Published by Messrs. H. K. Lewis & Co., Ltd. *Price 5s. net.*

THE author throughout stresses the importance of recognising that most drug addicts are not criminals but invalids; and his book is a valuable contribution to the literature on the subject. He also lays great weight on the importance of avoiding all shock by too hasty withdrawal of the drug. It is a readable book, but printed on inferior paper.

Shorter Convalescence. By Lieut.-Col. JAMES MCCONNEL. Published by Messrs. Heinemann. *Price 5s.*

THIS little book contains articles on the developmental survey of the upright position of man, on the physiological and anatomical processes by which such a position is maintained, and on the various types of exercise most calculated to restore the convalescent patient's muscle balance and strength. It should be valuable to the young practitioner and to the enthusiastic houseman.

The Physiological Principles of Hydrology. By R. G. GORDON and F. G. THOMSON. Published by Messrs. Jonathan Cape, Ltd. *Price 5s. net.*

THIS book attempts to lay before the average medical man the "cans" and "can'ts" of this branch of medicine. It is written in a clear and interesting manner, and can safely be recommended to anyone interested in hydrology.

Modern Treatment of Diseases of the Throat, Nose and Ear. By M. LAWSON WHALE. Published by Messrs. Jonathan Cape, Ltd. *Price 5s. net.*

THIS is a very useful and entertaining book, and should be indispensable to the young G.P. who finds himself in difficulties in his throat work. It is conveniently divided into four parts, dealing with each organ individually, and the text is supplemented by a reference list, very extensive for such a slim volume as this.

Modern Psychotherapy. By EMANUEL MILLER. Published by Messrs. Jonathan Cape, Ltd. *Price 5s. net.*

THE author steers his way very cleverly between the Charybidis of technicality and the Scylla of simplification, and has produced a monograph interesting both to physician and layman. It is not, and does not profess to be, an exhaustive treatise on the subject, but it contains many points of interest presented in a novel way.

St. Bartholomew's Hospital Reports. Vol. LXIII. (*John Murray.*)

THE contents of this number are as follows:—

Obituary Notice on Sir Anthony Alfred Bowlby, late Consulting Surgeon to St. Bartholomew's Hospital.

A Description of the New Surgical Block. By T. A. Lodge. This describes in detail the various advances made in ward and theatre construction, and also gives information on the new system by which nitrous oxide, oxygen, etc., are led straight into the operating theatre from a central storage plant.

An Unusual Case of Tuberculous Meningitis. By Sir Thomas Horder.

The Therapeutic Uses of Diuretics in Cardiac Œdema. By Professor Francis R. Fraser.

Suprarenal Carcinoma and Visiliam in Women. By Dr. W. Langdon Brown and W. Girling Ball. This is the report of a most interesting case, and the extensive investigations of physician, surgeon and pathologist are all presented.

Metastatic Carcinoma of the Choroid. By R. Foster Moore, O.B.E., and Geoffrey Evans.

The Problem of the Ætiology of Hodgkins' Disease. By Dr. Gordon. This is a paper of constructive criticism of the present knowledge of the disease.

The Application of Ovarian Physiology to Clinical Gynæcology. By Dr. Wilfred Shaw. In this the writer presents a simple and easily-grasped picture of the more substantial advances made by physiology into the mysteries of the ovary, and, while destroying many fallacies, gives his physiological sanction to certain methods of organotherapy in gynæcology.

The Period of Disability in Ambulatory Fractures. By Mr. Rupert S. Corbett. A concise summary of the statistics obtained by various clinics in the treatment of fractures; and shows clearly how convalescence is materially shortened if the patient, as is all too rare, can manage to obtain light work during the latter part of his recovery.

The Diagnosis of Bronchial Concinoma. By Drs. Maxwell and Nicholson. The authors stress at the beginning the need for very early diagnosis, but in few ways do they suggest any valuable new "tips" in diagnosis. We feel that such clinical signs as involvement of nerves, cyanosis and dilatation of veins should be given only fleeting attention in a paper devoted as this, is, to the *early* diagnosis of pulmonary neoplasm.

The Serum Treatment of Pneumonia. By Drs. Armstrong and Johnson. Another contribution to that hotly-debated subject.

The Clinical Value of Transduodenal Biliary Drainage. By Dr. Dick. A long and interesting paper on the value of this procedure in diagnosis and treatment. The argument is supported by numerous statistics and by some well reported case histories.

Perforated Gastric and Duodenal Ulcer. By R. W. Raven. This is an attempt to show statistically the value or the reverse of gastro-jejunostomy combined with suture in the operation for perforated ulcer. The paper is rendered dull and difficult to read by the interlarding of stray figures and numbers with no reference to percentages. The writer has evidently expended no small effort upon the compilation of the paper and of the case histories.

Sport

Rugby

Guy's v. Northampton

VISITING Northampton onSaturday,November 29th, Guy's, after a gallant effort, had to admit defeat by a placed goal, a penalty goal and a try (11 points) to a try (3 points).

Guy's were compelled to make two last-minute changes in their back division, as Johnson was indisposed and W. Lewis found that he was unable to catch the train. Fortunately, Hale-Monro happened to be at hand and played in place of Lewis and Burrows made his first appearance for the first fifteen in the left wing.

Heavy rain before the match had made the ground very muddy and heavy when Guy's kicked off against the wind. The Hospital at once attacked, and, after securing the ball in the early scrums, were unlucky not to score. Eventually the ball went loose, and the home forwards made a fine dribble to the Hospital's 25—a round of passing followed, and eventually Harris crossed for a try, which was not converted.

A clever cut through by Giesen created a great opening for Thomas, but the referee decided that Giesen's pass (which appeared to be a perfectly good one) to be forward.

However, Guy's did not give up hope, and eventually equalised as the result of good passing between the threes, which Popplewell finished off by crossing for a try, too far out for Hogbin to convert.

Soon after this a disaster befell Guy's, when Windsor Lewis, following a heavy tackle, twisted his knee and had to leave the field.

Popplewell was withdrawn from the pack to the three-quarter line, but, in spite of this, the forwards continued to control the scrums, and for a time set their feet in the home 25.

Northampton relieved the pressure and, following a breakaway by their forwards, the threes were placed in possession, and a fine round of passing ended in Treen crossing for a try from which he placed a goal.

Before the interval Guy's were penalised near mid-field and, from a difficult angle, Treen kicked an excellent goal.

After changing over, the Hospital launched attack after attack, but could not penetrate a solid defence. Windsor Lewis returned and played at full-back, he was obviously suffering from the effects of his injury, but luckily he had not a great deal to do.

During this half, Giesen made several brilliant attempts to break through, but, unfortunately, he had no one fast enough to back him up, and he undoubtedly missed the speedy Fichardt.

No further scoring took place, and Guy's retired losers as stated.

Team.—T. A. Hale-Monro; G. A. Burrows, J. E. Giesen, I. K. Thomas, D. E. Ashdown; W. H. Lewis (Capt.), R. J. Eustace; J. S. Batchelor, J. P. O'Shea, R. G. Knight, I. G. Robin, J. R. F. Popplewell, T. Morgan, G. F. Lashmore, R. A. P. Hogbin.

Guy's v. United Services (Portsmouth)

THE Hospital accomplished a splendid performance when, on Wednesday, December 3rd, they journeyed to Portsmouth and, with a depleted side, ran the home side to a pointless draw.

Owing to injuries, Guy's were compelled to make several alterations in their side, as Lashmore, Robin, Windsor Lewis, Johnson and Fichardt were all unable to turn out, but their substitutes showed such good form that the Services were fortunate to force the Hospital to a division of points.

Indeed, so much did Guy's press in the closing stages that it would have caused no surprise to the spectators had the Hospital gained an unexpected victory.

Hogbin made a brilliant attempt near the end to land a penalty goal, but, he just failed with a fine kick from an extremely difficult angle.

Guy's started off in a manner that suggested that they would overwhelm the defence of the Services. The forwards heeled cleanly, and, with Eustace getting the ball away quickly to Thomas, the latter was able to supply his backs with innumerable opportunities of opening up the game. On two occasions the Hospital should have scored, but, unfortunately, the final passes to the wings either went astray or were missed.

A great stumbling-block was G. C. Gosling at full-back, who saved his line time after time by going down to the feet of the Guy's forwards and finding touch by some superlative kicking.

The Services resorted to individual efforts to break through, but the defence gave nothing away, and keen tackling nullified any advantage gained.

One feature of the match was the splendid work of the Guy's forwards, who, although faced by a heavier pack, were masters of the situation both in the set-scrums and the loose. Burrows, who was playing on the left wing, endorsed the favourable impression created at Northampton the week before, and had a firm hold upon his opposite number, D. St. Clair Ford.

It was a fine game and fought out at a capital pace. The teams were fairly evenly matched, but over-anxiety caused many mistakes, with the result that a number of excellent opportunities were lost.

Team.—W. Lewis; D. E. Ashdown, S. R. Peatfield, J. E. Giesen, G. A. Burrows; I. K. Thomas, R. J. Eustace; J. S. Batchelor, J. P. O'Shea, R. J. Drummond, R. G. Knight, P. K. Robinson, T. Morgan, R. A. T. Rowlett, R. A. P. Hogbin.

Guy's v. Richmond

ON Saturday, December 6th, the Hospital resumed their list of home fixtures by entertaining Richmond, whom they defeated by 3 tries (9 points) to nil.

It was a pity that both teams had to take the field with depleted sides as, on the one hand, Guy's were without several of their regular members of the back division, whereas Richmond had a number of their first team absent owing to another fixture which they had to fulfil in Ireland.

An interesting item was the fact that both the touch judges were Guy's men—H. Millett, who represented Richmond, and Windsor Lewis, the captain of the present Hospital fifteen.

Incidentally it may not be generally known that since leaving Guy's, Millett played for a time as full-back for Richmond, where he gained his International cap for England. Since he retired from the game he has put in a tremendous amount of hard work in his capacity as honorary secretary of the United Hospitals' Rugby Football Club.

The weather was inclined to be foggy, and towards the end of the game it was difficult to distinguish the figures on the other side of the field.

The ground itself was in remarkably good condition, and a fair number of spectators saw an excellent game between two hard-working packs and some really first-class play by the outsides.

Guy's were largely indebted for their success to the brilliance of I. K. Thomas at stand-off half, who was at the top of his form both in attack and defence.

W. Lewis was safe at full-back, and Burrows again showed up prominently in the three-quarter line.

The forwards worked extremely hard throughout and it would be difficult to pick out individuals for special mention, but Popplewell, Morgan, Hogbin and O'Shea were always to the fore.

Once again the visitors' full-back proved to be a stumbling-block to the many attacks launched by the Hospital, but even after he was injured Mennin persisted in playing on, and appeared to be safer than ever.

The only score during the first half was an unconverted try by T. Morgan after a good run by Popplewell. The other tries were obtained after the interval by G. A. Burrows and H. J. B. Atkins, and in each case R. A. P. Hogbin was unlucky in trying to convert, as the ball hit the goal-post and bounced back into the field of play.

Team.—W. Lewis; D. E. Ashdown; H. J. B. Atkins, L. Wailer, G. A. Burrows; I. K. Thomas, R. J. Eustace, J. S. Batchelor, J. P. O'Shea, R. G. Knight, I. G. Robin, J. R. F. Popplewell, R. A. P. Hogbin, G. F. Lashmore, T. Morgan.

Guy's v. Aberavon

AT Honor Oak Park on Saturday, December 13th, Guy's did very well to share the spoils with Aberavon, who have a particularly fine record this season. The ground was so muddy and waterlogged that at one time it was doubtful whether the match would be played, and, considering the conditions, it was quite an interesting game, which ended in a pointless draw.

Windsor Lewis was still an absentee from the Hospital side, and, in addition, T. Morgan could not play owing to an injury he received during the week when playing for Kent.

I. K. Thomas again occupied the fly-half position and Wailer was given another opportunity at right centre, where he gave a much better display.

Rowlett, who came into the pack, played a sterling game throughout, and was always to the fore both in attack and defence. Walter Lewis at full back gave another convincing exhibition when he demonstrated that his defence has improved considerably.

Guy's kicked off, and, after a short period of mid-field play, the forwards cleverly dribbled the ball to Aberavon's 25, where Tal Harris made a fine save by taking the ball from the feet of the forwards and finding touch near mid-field.

A nice cut through by Giesen looked dangerous for the visitors, but Thomas knocked on, and Aberavon retaliated with a dashing raid, which was spoilt through Harris getting offside.

Another fine effort by Giesen, following good work by the forwards, compelled the visitors to touch down, and immediately afterwards Guy's were forced to do the same. Hayes ended a clever run by punting over the head of Lewis, but luckily Giesen was at hand, and won the race for the ball as it crossed the line.

A minute or two later another passing movement between the visitors' threes should have ended in a score, but Hayes missed a long pass from Harris and lost an ideal opportunity.

Guy's returned to the offensive, and the forwards again dribbled the ball to within a few yards of the posts, where Harris came to the rescue and cleared.

After Thomas had made a good run, Aberavon were penalised for offside, and Hogbin tried to land a penalty goal from the muddy patch in front of the stand.

The Hospital threes made several attempts to get through, and clever play by Wailer, Giesen and Thomas forced the visitors to touch down. From the kick-off the Aberavon pack carried out a determined raid, and Walter Lewis brought off a particularly fine save when he went down to the feet of three forwards.

Following an excellent dribble by Wailer, Aberavon attacked again before the interval and forced a line-out near the corner flag, which was cleared when the whistle went for half-time.

In the first minute following the resumption, Guy's were awarded a penalty, but, although Eustace found touch with a lengthy kick, the Aberavon forwards made another dashing raid and actually crossed the line, but a knock-on just previously, brought them back to a five-yards' scrum, which was cleared by Giesen.

The visitors continued to press through their pack, and another fine round of passing from left to right broke down when Phillips gave a forward pass to his wing, who had a clear run in.

Very fine work by Popplewell, Hogbin, Batchelor and Knight transferred play to Aberavon's quarters, but the ground was so thick with mud that the players had great difficulty in kicking the ball even a yard. Several stops were made during the game whilst the mud was removed from the eyes of players, and several of them must have been relieved when the whistle went for no-side.

Guy's made determined efforts to get through, and eventually Ashdown, after a good run, followed up a short punt, which Owen, the visitors' full-back, did well to clear.

The Hospital kept up the pressure, and when I. K. Thomas caught Hayes in possession well inside the visitors' 25, a score appeared certain, but once again Owen cleared with a great kick to touch.

It was a well-contested and clean game, fought out at a fast pace, and a draw was a fitting result.

Team.—W. Lewis; D. E. Ashdown, L. Wailer, J. E. Giesen, G. A. Burrows; I. K. Thomas, R. J. Eustace; J. S. Batchelor, J. P. O'Shea, R. G. Knight, I. G. Robin, J. A. T. Rowlett, J. R. F. Popplewell, G. F. Lashmore, R. A. P. Hogbin.

Fencing

Guy's II v. William Black Institute

ON December 6th, a 2nd Team from Guy's visited the William Black Institute, Hackney, for a three-a-side in foil, epée and sabre, and won by the comfortable margin of 10 defeats to 17.

In the foil event Paterson fought excellently, and won all his fights with comparative ease, while Forbes showed confidence and steadiness and won two. His parrying was very good and he was quick to riposte, but he was inclined to rely too much on his defence and did not attack quite enough. Machado was a little wild and unsteady at first, but improved later and won one of his contests.

In epée Paterson again won all his fights, while Lawrence used his reach to advantage and was only defeated once. Irish was disappointing in this event and sustained two defeats.

The sabre proved to be our opponents' best weapon, and Guy's won this event by the odd fight only. Paterson won two of his encounters;

he fought well, but tended to depend too much on stop hits. Forbes suffered from lack of experience in this weapon and was defeated in all his contests; with more practice, however, he should make a good sabreur. Irish gave a good performance in the sabre event, and won all his fights.

When it is considered that neither Forbes, Lawrence nor Machado had represented the Hospital in any previous match, the performance of the team must be regarded as very creditable, and shows that the Club has good material from which to select future teams.

The scores were: Foil—Paterson, 0 defeats; Forbes, 1 defeat; Machado, 2 defeats. Epée—Paterson, 0 defeats; Lawrence, 1 defeat; Irish, 2 defeats. Sabre—Irish, 0 defeat; Paterson, 1 defeat; Forbes, 3 defeats.

Guy's v. R.N.C., Greenwich

ON December 11th, the Guy's team was entertained by the Royal Naval College, Greenwich, for a match in foil, epée and sabre, which was won by Guy's by 10 defeats to 17.

Monkhouse fought remarkably well in the foil event, and won all his fights; Pitts was well on his target in all three of his contests, of which he won two, while Forbes, although inexperienced, did well and won one. He was still rather too reliant on his defence.

In epée Monkhouse and Pitts both fought well, and each won two fights. Hodgkin showed considerable improvement and displayed more confidence, suffering but one defeat.

In sabre Monkhouse fought with no little skill, scoring most of his hits with a riposte, while Wright used his footwork to advantage to score several well-timed stop hits. Irish did not attain the standard which one now expects of him, and sustained two defeats.

The scores were: Foil—Monkhouse, 0 defeats; Pitts, 1 defeat; Forbes, 2 defeats. Epée—Monkhouse, 1 defeat; Pitts, 1 defeat; Hodgkin, 1 defeat. Sabre—Monkhouse, 1 defeat; Wright, 1 defeat; Irish, 2 defeats.

Hospital Information, etc.

Pass List

LONDON UNIVERSITY.
THIRD (M.B., B.S.) EXAMINATION FOR MEDICAL DEGREES.
November, 1930.
HONOURS.
D. W. C. Northfield
(*University Medal, with Distinction in Midwifery and Surgery*).
PASS.

W. L. M. Bigby — C. K. Simpson
F. E. Camps — H. H. Steadman
H. J. Croot — F. H. Stevenson

GROUP I.
Medicine, Pathology and Forensic Medicine.
J. Carlton — R. J. L. O'Donoghue

GROUP II.
Surgery and Midwifery.
J. B. Blaikley — F. W. Chippindale
S. A. Scorer

CAMBRIDGE UNIVERSITY.
Doctor of Medicine.
W. H. Craib.

ROYAL COLLEGE OF SURGEONS.
F.R.C.S. (*Final*).
D. G. Bown.

Papers by Guy's Men

S. C. Brown. Trigeminal neuralgia. *Clin. J.*, 1930, lix, 568.

P. M. Deville. Treatment of varicose ulcers. *B.M.J.*, 1930, ii, 1000.

G. B. Dowling. Atrophic lesions on joints of hands and feet; case for diagnosis. *Proc. R.S.M.*, 1930, xxiv, 102.

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L. G. Housden. Medical means of ensuring a normal dentition. *Brit. Dent. J.*, 1930, li, 1330.

F. A. Knott and W. L. Watt. Irradiation and the leukæmias. *B.M.J.* 1930, ii, 991.

Appointments

St. G. B. D. Gray, F.R.C.S. (Edin.), Assistant Surgeon, Royal Alexandra Hospital for Sick Children, Brighton.

C. G. Townsend, M.R.C.S., L.R.C.P., Honorary Assistant Anæsthetist, King Edward VII Hospital, Windsor.

Change of Address

L. R. Broster, O.B.E., D.M., M.Ch., F.R.C.S., 111, Harley Street, W.1. *Welbeck* 2567.

W. L. Locke, M.B., Ch.B., 62, Wimpole Street, W.1. *Welbeck* 3037.

S. de Nevasquez, 7, Langford Place, St. John's Wood, N.W.8.

E. J. Pye-Smith, Vernon House, Huddersfield. *'Phone* 730.

Wing-Commander H. M. S. Turner, M.D., F.R.C.S. (Edin.), R.A.F. (retired), 65, Stert Street, Abingdon-on-Thames, Berks.

Engagement

EVANS—NORTON.—The engagement is announced between Dr. Roy Evans, of Epping, only son of the late J. J. Evans, of Cheltenham Spa, and Kathleen Joyce, elder daughter of Mr. and Mrs. S. C. Norton, of Theydon Bois, Essex.

Death

TAYLOR—On December 16th, 1930, at Ewell, Surrey, Edward Henry Taylor, for many years the conductor of Guy's Hospital Choral Society, aged 90 years.

EDS. { P. M. F. B.
P. V. R.

A. T. Fripp.